United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with Purdue
University Agricultural
Experiment Station

Soil Survey of Clark County, Indiana

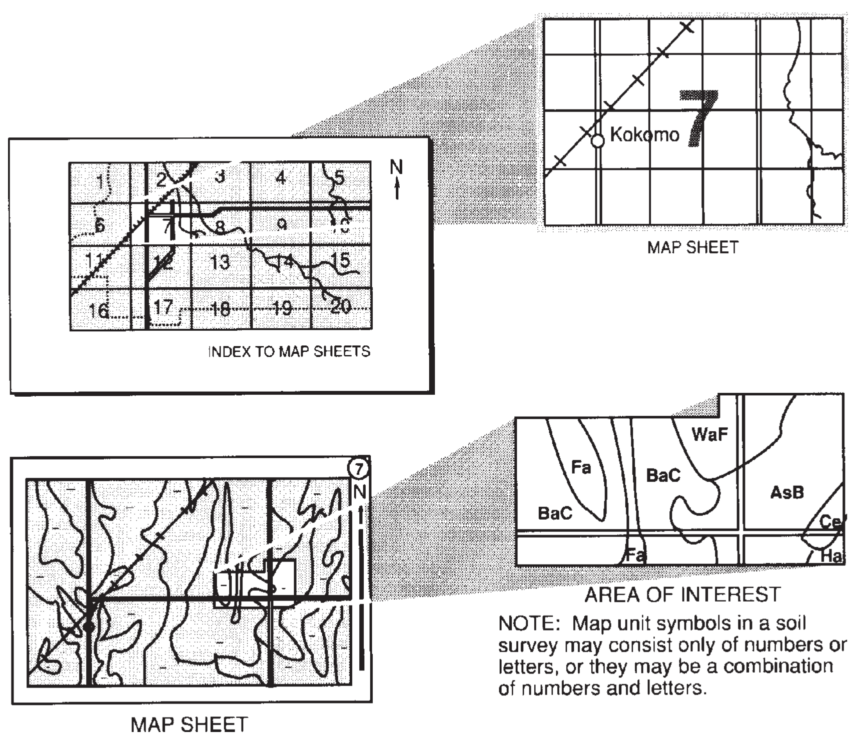
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Purdue University Agricultural Experiment Station. It is part of the technical assistance furnished to the Clark County Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 2000. Soil names and descriptions were approved in 2001. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2001. The most current official data are available on the Internet.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Nondiscrimination Statement

Cover Photo Caption

View overlooking Clark County from the Knobstone Escarpment.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2007

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Jane Hardisty
State Conservationist
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Soil Survey of
Clark County, Indiana

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with Purdue University Agricultural Experiment Station

Clark County is in southeastern Indiana (fig. 1). It has an area of 240,736 acres, or about 376 square miles. The county is in four major land resource areas (MLRAs): the Southern Illinois and Indiana Thin Loess and Till Plain, Eastern Part (MLRA 114A); the Kentucky and Indiana Sandstone and Shale Hills and Valleys, Northeastern Part (MLRA 120C); Kentucky Bluegrass (MLRA 121); and Highland Rim and Pennyroyal (MLRA 122) (USDA, 2006). Jeffersonville, the county seat and largest town, is in the extreme southern part of the county. In 2000, the population of the county was 96,472 and the population of Jeffersonville was 27,362 (U.S. Department of Commerce, 2000).

The land in the county is primarily used for urban development or as farmland. The primary farm enterprises are cash grain crops and the production of livestock. Corn, soybeans, and winter wheat are the main cash grain crops. Tobacco and other specialty crops also are grown. Hogs and beef cattle are the main livestock raised, and there are a few dairy, poultry, truck crop, and sheep and goat operations in the county. Approximately 30 percent of the county is cropland, 10 percent is pasture, and 37 percent is woodland. The rest is used for urban and industrial purposes.

The areas around cities and towns have been annexed, and the land use is rapidly changing. Some areas lend themselves to urban development with few limitations, but other areas have so many limitations that nonfarm uses are questionable.

This soil survey updates the Clark County part of the soil survey of Clark and Floyd Counties published in 1974 (Nickell, 1974). It provides larger maps, which show the soils in greater detail. It also provides additional information about soil interpretations.

Figure 1.—Location of Clark County in Indiana.

General Nature of the Survey Area

This section gives general information about the physical and cultural features of the county. It describes history and development; physiography, relief, and drainage; and climate.

History and Development

The earliest evidence of occupation in the survey area is in artifacts found near the "Falls of the Ohio" State Park. The artifacts date to more than 4,000 years ago. The native Indians planted corn on the rich bottom land and hunted wild game, which was abundant in the rolling, wooded uplands.

Clark County is on the north bank of the Ohio River and is a significant gateway to the State of Indiana. Settlement of the area began in 1783. The State of Virginia rewarded General George Rogers Clark and his regiment for their victorious capture of Forts Kaskaskia, Cahokia, and Vincennes from the British by granting them 150,000 acres of land. A small portion of this land, 1,000 acres, became known as Clarksville. Clarksville, the first authorized American settlement in the Northwest Territory, was founded in 1784.

Organized in 1801, Clark County originally included all or part of Floyd, Clark, Harrison, Washington, Scott, Jennings, Jackson, Ripley, Decatur, Bartholomew, Franklin, Shelby, Rush, Fayette, Union, Randolph, Henry, Wayne, Jay, and Switzerland

Counties. The platting of Jeffersonville occurred in 1802. Clarksville, with a population of 21,400, is the next largest town, followed by Sellersburg, Charlestown, Henryville, Borden, and Utica.

The history of Clark County has been closely associated with the development of the Ohio River. From its beginnings, Clark County relied on the river for economic opportunities. Clark County has diversified its economic base and reduced its dependency on the river and continues to develop in new directions; however, the river still provides an important link to Clark County's significant pioneer heritage.

Physiography, Relief, and Drainage

The soils in Clark County formed in parent materials within four physiographic regions (Muscatatuck Plateau, Charlestown Hills, Norman Upland, and Mitchell Plateau) (Gray, 2001). The parent materials include glacial till of Illinoian age; lacustrine deposits of Wisconsinan age; residuum from limestone, siltstone, black shale, and gray-green shale; alluvium; and loess. Till from the Illinoian glacier covers a large part of Clark County, mainly east of the Knobstone Escarpment (fig. 2). As the ice receded, a thin mantle of till was left over the bedrock.

Ice from the Wisconsinan glacier did not reach Clark County, but the glacier influenced the formation of lacustrine soils near the mouth of Silver Creek and other streams in the county. This fine textured, calcareous material deposited by drift of Wisconsinan age was carried down the Ohio River in meltwaters and deposited in the stream valleys. The clays settled out and left broad plains. Recent erosion has dissected these plains, leaving them several feet above the current streambed.

Most of the black shale is buried beneath till and other parent materials. Only a few areas have soils that formed in the black shale. In unglaciated areas, soils formed in material weathered from the underlying bedrock. The sedimentary rocks consist of layers of limestone, siltstone, and shale, all of which range from a few feet to several hundred feet in thickness. These formations have a downward tilt to the west of about

Figure 2.—A view from the Knobstone Escarpment overlooking Scott County, Indiana, to the north.

20 to 25 feet per mile. Rock formations of the Lower Mississippian period are exposed. These formations consist of gray-green shale at the lower elevations. Above this and westward, interbedded olive-brown siltstone and shale are exposed. This area is the Norman Upland region. Farthest west and at the highest elevations, limestone of the Lower Mississippian period is exposed above the Norman Upland and at the start of the Mitchell plain region, which is near the boundary between Clark and Washington Counties. The soils are typically redder than soils in other areas and have more clay. Typically, these areas have sinkholes. If there are enough sinkholes, the area is said to have karst topography (fig. 3). Nearly level flood plains are along the streams in all of the physiographic regions.

The highest elevation in the county, about 1,020 feet above sea level, is in Carr Township about 3/4 mile southwest of Bennettsville and above the Knobstone Escarpment. The lowest elevation, about 390 feet above sea level, is in an area along the Ohio River where it leaves Clark County. The entire county watershed drains into the Ohio River and its tributaries. The main streams that drain into the Ohio River are Silver Creek, Muddy Fork, and Fourteen Mile Creek.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Salem in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 32.7 degrees F and the average daily minimum temperature is 23.3 degrees. The lowest temperature on record, which occurred at Salem on February 2, 1951, is -32 degrees. In summer, the average

Figure 3.—An area of karst topography on an Illinoian till plain bench.

temperature is 73.9 degrees and the average daily maximum temperature is 85.6 degrees. The highest temperature, which occurred at Salem on July 14, 1954, is 105 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual total precipitation is 45.28 inches. Of this total, about 27 inches, or 59 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 7.20 inches at Salem on July 20, 1988. Thunderstorms occur on about 45 days each year, and most occur between May and August.

The average seasonal snowfall is 19.8 inches. The greatest snow depth at any one time during the period of record was 20 inches recorded on February 1, 1978. On an average, 21 days of the year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 12.0 inches recorded on February 1, 1966.

The average relative humidity in midafternoon is about 56 percent. Humidity is higher at night, and the average at dawn is about 81 percent. The sun shines 66 percent of the time possible in summer and 43 percent in winter. The prevailing wind is from the south for most of the year, but it is from the northwest during February and March. Average windspeed is highest, around 10 miles per hour, from January through April.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the degree of erosion; the general pattern of drainage; and the kinds of crops and native plants. To study the soil profile, which is the sequence of natural layers, or horizons, soil scientists examine the soil with the aid of a soil probe or auger. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the relationships among soils, vegetation, and geomorphological considerations, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Fieldwork in Clark County consisted primarily of soil transects conducted by soil scientists. Soil transects are a systematic way of characterizing the composition of the specific soil types within a map unit. Soil borings are taken at regular intervals.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features. The results of these and other observations enable the soil scientists to assign the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Data are assembled from other sources, such as research information, production records, and field experience of specialists.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

Aerial photographs used for fieldwork in this survey were taken in 1992 and included stereoscopic coverage of most of the county. The entire county was evaluated stereoscopically, and adjustments to the original soil boundaries were drawn on these photographs. Soil scientists also studied U.S. Geological Survey topographic maps enlarged to a scale of 1:12,000. These enlarged topographic maps were used to help adjust the original soil boundary lines in forested areas.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of an improved knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape. In some cases a minor component may be referred to that was not correlated in Clark County but that has been mapped within one of the major land resource areas (MLRAs) of which Clark County is a part.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a soil series. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, degree of erosion, frequency of flooding, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases.* Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Pekin silt loam, 2 to 6 percent slopes, eroded, is a phase of the Pekin series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are called complexes. A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Crider-Bedford-Navilleton silt loams, 2 to 6 percent slopes, is an example.

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. Pits, quarry, is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

AddA—Avonburg silt loam, 0 to 2 percent slopes

Setting

Landform: Illinoian till plains
Position on the landform: Summits

Map Unit Composition

Avonburg and similar soils: 85 percent
The poorly drained Cobbsfork and similar soils in depressions: 10 percent
The moderately well drained Nabb and similar soils on summits: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Avonburg Soil

Parent material: Loess and the underlying paleosol that formed in till
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to a fragipan
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

AddB2—Avonburg silt loam, 2 to 4 percent slopes, eroded

Setting

Landform: Illinoian till plains
Position on the landform: Upper backslopes and shoulders

Map Unit Composition

Avonburg and similar soils: 75 percent
The moderately well drained Nabb and similar soils on backslopes and shoulders: 10 percent
The poorly drained Cobbsfork and similar soils in depressions: 10 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Avonburg Soil

Parent material: Loess and the underlying paleosol that formed in till
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 40 to 60 inches to a fragipan
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

BbhA—Bartle silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads

Map Unit Composition

Bartle and similar soils: 83 percent
The poorly drained Peoga and similar soils in depressions: 10 percent
The moderately well drained Pekin and similar soils on risers: 5 percent
The rarely flooded Bartle and similar soils on footslopes: 2 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Bartle Soil

Parent material: Loess over silty alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

BcrAQ—Beanblossom silt loam, 1 to 3 percent slopes, rarely flooded

Setting

Landform: Alluvial fans and flood plains

Map Unit Composition

Beanblossom and similar soils: 90 percent
Beanblossom, occasionally flooded, and similar soils: 5 percent
The moderately well drained Wilbur and similar soils on alluvial fans and flood plains: 5 percent

Interpretive Groups

Land capability classification: 2s
Prime farmland category: Prime farmland

Properties and Qualities of the Beanblossom Soil

Parent material: Loamy-skeletal alluvium over Mississippian siltstone or shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate to rapid
Permeability below a depth of 40 inches: Impermeable to rapid
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 7.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 3.3 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

BcrAW—Beanblossom silt loam, 1 to 3 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Alluvial fans and flood plains

Map Unit Composition

Beanblossom and similar soils: 89 percent
The moderately well drained Wilbur and similar soils: 5 percent
Deep, somewhat poorly drained, loamy soils: 3 percent
Beanblossom, frequently flooded, very brief duration, and similar soils: 3 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Beanblossom Soil

Parent material: Loamy-skeletal alluvium over Mississippian siltstone or shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate to rapid
Permeability below a depth of 40 inches: Impermeable to rapid
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 7.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 3.3 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

BdoA—Bedford silt loam, 0 to 2 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Summits

Map Unit Composition

Bedford and similar soils: 90 percent
The well drained Crider and similar soils on summits: 10 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Bedford Soil

Parent material: Loess, loamy material, and the underlying paleosol that formed in clayey residuum
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 20 to 38 inches to a fragipan (fig. 4); 80 to 120 inches to lithic bedrock
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Figure 4.—A view of the top of a fragipan showing the characteristic polygonal arrangement of bleached prism faces. Fragipans are dense and brittle and restrict the penetration of roots.

BdoB—Bedford silt loam, 2 to 6 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Shoulders and summits

Map Unit Composition

Bedford and similar soils: 90 percent
The well drained Crider and similar soils on shoulders and summits: 10 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Bedford Soil

Parent material: Loess, loamy material, and the underlying paleosol that formed in clayey residuum
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 20 to 38 inches to a fragipan; 80 to 120 inches to lithic bedrock
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

BfbC2—Blocher, soft bedrock substratum-Weddel silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with shale or siltstone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Blocher, soft bedrock substratum, and similar soils: 46 percent
Weddel and similar soils: 30 percent
Blocher, soft bedrock substratum, severely eroded, and similar soils: 10 percent
Weddel, severely eroded, and similar soils: 5 percent
The moderately well drained Coolville and similar soils on backslopes and shoulders: 4 percent

The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent
Weddel and similar soils that have slopes of less than 6 percent (on summits): 2 percent

Interpretive Groups

Land capability classification: Blocher, soft bedrock substratum—3e; Weddel—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Blocher Soil

Parent material: Loess and loamy and clayey till over Mississippian shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 60 to 80 inches to paralithic bedrock
Available water capacity: About 9.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Weddel Soil

Parent material: Loess, loamy till, and the underlying paleosol that formed in clayey residuum over Mississippian shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 60 to 90 inches to paralithic bedrock
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

BfcC3—Blocher, soft bedrock substratum-Weddel complex, 6 to 12 percent slopes, severely eroded

Setting

Landform: Illinoian till plains underlain with shale or siltstone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Blocher, soft bedrock substratum, and similar soils: 49 percent
Weddel and similar soils: 32 percent
Blocher, soft bedrock substratum, eroded, and similar soils: 5 percent
Weddel, eroded, and similar soils: 5 percent
The moderately well drained Coolville and similar soils on backslopes and shoulders: 4 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent
Weddel and similar soils that have slopes of less than 6 percent (on summits): 2 percent

Interpretive Groups

Land capability classification: Blocher, soft bedrock substratum—4e; Weddel—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Blocher Soil

Parent material: Loess and loamy and clayey till over Mississippian shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 60 to 80 inches to paralithic bedrock
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Weddel Soil

Parent material: Loess, loamy till, and the underlying paleosol that formed in clayey residuum over Mississippian shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 60 to 80 inches to paralithic bedrock

Available water capacity: About 7.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

BnyD3—Bonnell clay loam, 12 to 22 percent slopes, severely eroded

Setting

Landform: Illinoian till plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

Bonnell and similar soils: 74 percent
Bonnell, eroded, and similar soils: 10 percent
The well drained Hickory, eroded, and similar soils: 10 percent
The moderately well drained, moderately sloping Cincinnati and similar soils on shoulders: 3 percent
The moderately well drained, moderately sloping Blocher and similar soils on shoulders: 2 percent
The somewhat poorly drained Holton and similar soils in narrow drainageways: 1 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Bonnell Soil

Parent material: Clayey till
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete

Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

BobE5—Bonnell-Hickory clay loams, 15 to 30 percent slopes, gullied

Setting

Landform: Illinoian till plains
Position on the landform: Backslopes and shoulders
Microfeature: Between 50 and 90 percent of this map unit is gullied. The gullied areas consist of a network of both U-shaped and V-shaped gullies averaging between 2 and 6 feet in depth.

Map Unit Composition

Bonnell, gullied, and similar soils: 45 percent
Hickory, gullied, and similar soils: 30 percent
Bonnell, severely eroded, and similar soils: 8 percent
Hickory, eroded, and similar soils on backslopes: 6 percent
The moderately well drained, moderately sloping Cincinnati, eroded, and similar soils on backslopes and shoulders: 5 percent
The moderately well drained, moderately sloping Blocher, eroded, and similar soils on backslopes and shoulders: 4 percent
The well drained Trappist and similar soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: Bonnell—7e; Hickory—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gullied Bonnell Soil

Parent material: Clayey till
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 1.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Gullied Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate

Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 1.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

BodAW—Bonnie silt loam, 0 to 1 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Backswamps and flood plains

Map Unit Composition

Bonnie and similar soils: 83 percent
Bonnie, undrained, and similar soils: 10 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 5 percent
Bonnie, frequently flooded, very brief duration, and similar soils: 2 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Bonnie Soil

Parent material: Acid silty alluvium
Drainage class: Poorly drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface (January, February, March)
Frequency and most likely period of ponding: Frequent (January, February, March, April, May, December)
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

BvoG—Brownstown-Gilwood silt loams, 25 to 75 percent slopes

Setting

Landform: Hills and knobs underlain with siltstone
Position on the landform: Backslopes

Map Unit Composition

Brownstown and similar soils: 39 percent
Gilwood and similar soils: 38 percent
The moderately sloping and strongly sloping Gilwood, eroded, and similar soils on shoulders and backslopes: 10 percent
The moderately sloping and strongly sloping Wrays, eroded, and similar soils on shoulders and backslopes: 5 percent
The well drained Beanblossom and similar soils on alluvial fans and flood plains: 3 percent
Well drained, shallow, loamy soils on backslopes: 3 percent
Rock outcrop on escarpments: 2 percent

Interpretive Groups

Land capability classification: Brownstown—7e; Gilwood—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Brownstown Soil

Parent material: Loamy-skeletal residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderately rapid
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Gilwood Soil

Parent material: Loamy residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None

Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CcaG—Caneyville-Rock outcrop complex, 25 to 60 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Caneyville and similar soils: 53 percent
Rock outcrop on escarpments: 15 percent
The well drained Haggatt and similar soils on backslopes: 12 percent
The well drained Crider and similar soils on shoulders and backslopes: 10 percent
The well drained Corydon and similar soils on backslopes: 5 percent
The well drained Knobcreek and similar soils on shoulders and backslopes: 5 percent

Interpretive Groups

Land capability classification: Caneyville—7e; Rock outcrop—none assigned
Prime farmland category: Not prime farmland

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CkkB2—Cincinnati silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Illinoian till plains
Position on the landform: Summits and shoulders

Map Unit Composition

Cincinnati and similar soils: 80 percent
The moderately well drained Nabb and similar soils on summits and shoulders: 15 percent
The moderately well drained Blocher and similar soils on summits and shoulders: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Cincinnati Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.7 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

CldC2—Cincinnati-Blocher silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Illinoian till plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Cincinnati and similar soils: 42 percent
Blocher and similar soils: 34 percent
Cincinnati, severely eroded, and similar soils: 10 percent
Blocher, severely eroded, and similar soils: 8 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 5 percent
The well drained, strongly sloping Bonnell and similar soils on backslopes: 1 percent

Interpretive Groups

Land capability classification: Cincinnati—3e; Blocher—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Cincinnati Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.7 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Blocher Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CldC3—Cincinnati-Blocher silt loams, 6 to 12 percent slopes, severely eroded

Setting

Landform: Illinoian till plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

Cincinnati and similar soils: 42 percent
Blocher and similar soils: 34 percent
Cincinnati, eroded, and similar soils: 10 percent

Blocher, eroded, and similar soils: 8 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 5 percent
The well drained, strongly sloping Bonnell and similar soils on backslopes and shoulders: 1 percent

Interpretive Groups

Land capability classification: Cincinnati—4e; Blocher—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Cincinnati Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Slow
Depth to restrictive feature: 10 to 20 inches to a fragipan
Available water capacity: About 6.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Blocher Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ClfA—Cobbsfork silt loam, 0 to 1 percent slopes

Setting

Landform: Illinoian till plains and depressions
Position on the landform: Summits

Map Unit Composition

Cobbsfork and similar soils: 85 percent
Cobbsfork, undrained, and similar soils in depressions: 10 percent
The somewhat poorly drained Avonburg and similar soils on summits: 5 percent

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Cobbsfork Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Poorly drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: At the surface (January, February, March)
Frequency and most likely period of ponding: Frequent (December, January, February, March, April, May) (fig. 5)
Flooding: None
Hydric soil status: Hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

ComC—Coolville silt loam, 6 to 12 percent slopes

Setting

Landform: Hills underlain with shale and siltstone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Coolville and similar soils: 71 percent
The moderately well drained Stonehead and similar soils: 15 percent
Coolville, severely eroded, and similar soils: 5 percent
The moderately well drained Rarden and similar soils on backslopes and shoulders: 5 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 2 percent
The moderately well drained Weddel and similar soils on backslopes and shoulders: 2 percent

Figure 5.—Ponding in an area of Cobbsfork silt loam, 0 to 1 percent slopes.

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Coolville Soil

Parent material: Loess and clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 6.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ConC3—Coolville-Rarden complex, 6 to 12 percent slopes, severely eroded

Setting

Landform: Hills underlain with shale and siltstone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Coolville and similar soils: 45 percent
Rarden and similar soils: 45 percent
Coolville, eroded, and similar soils: 5 percent
The moderately well drained Stonehead and similar soils on backslopes and shoulders: 5 percent

Interpretive Groups

Land capability classification: Coolville—4e; Rarden—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Coolville Soil

Parent material: Loess and clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Rarden Soil

Parent material: Loess and clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Impermeable to moderately slow
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 4.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ConD—Coolville-Rarden complex, 12 to 18 percent slopes

Setting

Landform: Hills underlain with shale and siltstone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Coolville and similar soils: 51 percent
Rarden and similar soils: 30 percent
The well drained Kurtz and similar soils on backslopes: 8 percent
The well drained Gnawbone and similar soils on backslopes: 5 percent
The well drained Deam and similar soils on backslopes: 4 percent
The moderately sloping Coolville and similar soils on shoulders and backslopes: 2 percent

Interpretive Groups

Land capability classification: Coolville—4e; Rarden—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Coolville Soil

Parent material: Loess and clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 6.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Rarden Soil

Parent material: Loess and clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Impermeable to moderately slow
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None

Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CspA—Crider silt loam, 0 to 2 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Summits

Map Unit Composition

Crider and similar soils: 85 percent
The well drained Ryker and similar soils on summits: 10 percent
The moderately well drained Bedford and similar soils on summits: 5 percent

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 80 to 120 inches to lithic bedrock
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

CspB2—Crider silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Summits and shoulders

Map Unit Composition

Crider and similar soils: 85 percent
The well drained Ryker and similar soils on summits and shoulders: 10 percent
The moderately well drained Bedford and similar soils on summits and shoulders: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

CtrB2—Crider silt loam, karst, undulating, eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Summits and shoulders

Map Unit Composition

Crider, karst, and similar soils: 78 percent
Moderately well drained, loamy soils on footslopes: 10 percent
The well drained Haymond and similar soils on toeslopes: 5 percent
The well drained Ryker, karst, and similar soils on summits and shoulders: 5 percent
The moderately well drained Bedford and similar soils on summits and shoulders: 2 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None

Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

CtwB—Crider-Bedford-Navilleton silt loams, 2 to 6 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Summits and shoulders

Map Unit Composition

Crider and similar soils: 39 percent
Bedford and similar soils: 29 percent
Navilleton and similar soils: 28 percent
The well drained Knobcreek and similar soils on summits, shoulders, and backslopes: 4 percent

Interpretive Groups

Land capability classification: Crider—2e; Bedford—2e; Navilleton—2e
Prime farmland category: Prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Properties and Qualities of the Bedford Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in clayey residuum
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 20 to 38 inches to a fragipan; 80 to 120 inches to lithic bedrock

Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Properties and Qualities of the Navilleton Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

CwaAQ—Cuba silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood-plain steps

Map Unit Composition

Cuba and similar soils: 92 percent
The moderately well drained Steff and similar soils on flood-plain steps: 5 percent
Cuba, occasionally flooded, very brief duration, and similar soils on flood-plain steps: 3 percent

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland

Properties and Qualities of the Cuba Soil

Parent material: Acid silty alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate

Permeability below a depth of 40 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

CxgC3—Crider-Haggatt complex, 6 to 12 percent slopes, severely eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Crider and similar soils: 46 percent
Haggatt and similar soils: 46 percent
The well drained Caneyville and similar soils on backslopes and shoulders: 5 percent
The well drained Grayford and similar soils on backslopes and shoulders: 3 percent

Interpretive Groups

Land capability classification: Crider—4e; Haggatt—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CxhC2—Crider-Haggatt silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Crider and similar soils: 56 percent
Haggatt and similar soils: 37 percent
The well drained Caneyville and similar soils on backslopes: 3 percent
The well drained Grayford and similar soils on backslopes and shoulders: 2 percent
The well drained Ryker and similar soils on backslopes and shoulders: 2 percent

Interpretive Groups

Land capability classification: Crider—3e; Haggatt—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High

Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CxmC2—Crider-Haggatt silt loams, karst, rolling, eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Crider, karst, and similar soils: 52 percent
Haggatt, karst, and similar soils: 35 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
The well drained Caneyville, karst, and similar soils on backslopes and shoulders: 3 percent
The well drained Ryker, karst, and similar soils on backslopes and shoulders: 3 percent
The well drained Grayford, karst, and similar soils on backslopes and shoulders: 2 percent

Interpretive Groups

Land capability classification: Crider—3e; Haggatt—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

CxnC3—Crider-Haggatt complex, karst, rolling, severely eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Crider, karst, and similar soils: 44 percent
Haggatt, karst, and similar soils: 44 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
The well drained Caneyville, karst, and similar soils on backslopes and shoulders: 5 percent
The well drained Grayford, karst, and similar soils on backslopes and shoulders: 2 percent

Interpretive Groups

Land capability classification: Crider—4e; Haggatt—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Crider Soil

Parent material: Loess and the underlying paleosol that formed in clayey residuum
Drainage class: Well drained

Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

DbrG—Deam silty clay loam, 20 to 55 percent slopes

Setting

Landform: Hills underlain with shale
Position on the landform: Backslopes

Map Unit Composition

Deam and similar soils: 94 percent
The well drained Kurtz and similar soils on backslopes: 3 percent
The moderately well drained Rarden and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Deam Soil

Parent material: Clayey residuum over Mississippian shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 4.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

DdsAW—Dearborn silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains

Map Unit Composition

Dearborn and similar soils: 80 percent
The well drained Wirt and similar soils on flood plains: 10 percent
The well drained Woolper and similar soils on footslopes: 5 percent
The well drained Huntington and similar soils on flood plains: 3 percent
The well drained Haymond and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: 3s
Prime farmland category: Not prime farmland

Properties and Qualities of the Dearborn Soil

Parent material: Loamy-skeletal alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate or moderately rapid
Permeability below a depth of 40 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 5.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete

Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

DfnA—Dubois silt loam, 0 to 2 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits

Map Unit Composition

Dubois and similar soils: 85 percent
The poorly drained Peoga and similar soils on summits and in depressions: 10 percent
The moderately well drained Haubstadt and similar soils on summits: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Dubois Soil

Parent material: Loess and the underlying paleosol that formed in loamy lacustrine deposits
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 22 to 40 inches to a fragipan
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

DtvC2—Deputy-Trappist silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes and shoulders

Map Unit Composition

Deputy and similar soils: 50 percent
Trappist and similar soils: 27 percent
Deputy, severely eroded, and similar soils: 6 percent

The moderately well drained Jennings and similar soils on backslopes and shoulders: 5 percent
The moderately well drained Blocher, hard bedrock substratum, and similar soils on backslopes and shoulders: 4 percent
Trappist, severely eroded, and similar soils: 4 percent
Deputy and similar soils that have slopes of less than 6 percent (on summits): 2 percent
The well drained Rohan and similar soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: Deputy—3e; Trappist—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Deputy Soil

Parent material: Loess and clayey residuum over black shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock; 60 to 80 inches to lithic bedrock
Available water capacity: About 8.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

EbpD2—Eden silty clay loam, 12 to 25 percent slopes, eroded

Setting

Landform: Hills underlain with interbedded limestone and shale
Position on the landform: Backslopes

Map Unit Composition

Eden and similar soils: 82 percent
The well drained Carmel and similar soils on shoulders and backslopes: 10 percent
The well drained Woolper and similar soils on footslopes: 5 percent
The well drained Switzerland and similar soils on summits and shoulders: 3 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Eden Soil

Parent material: Clayey residuum over Ordovician shale and limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 2.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

EesA—Elkinsville-Millstone silt loams, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads

Map Unit Composition

Elkinsville and similar soils: 52 percent
Millstone and similar soils: 43 percent
The moderately well drained Sciotoville and similar soils on treads: 5 percent

Interpretive Groups

Land capability classification: Elkinsville—1; Millstone—1
Prime farmland category: Prime farmland

Properties and Qualities of the Elkinsville Soil

Parent material: Loess and loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Millstone Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

EesB—Elkinsville-Millstone silt loams, 2 to 6 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads

Map Unit Composition

Elkinsville and similar soils: 52 percent
Millstone and similar soils: 43 percent
The moderately well drained Sciotoville and similar soils on treads: 5 percent

Interpretive Groups

Land capability classification: Elkinsville—2e; Millstone—2e
Prime farmland category: Prime farmland

Properties and Qualities of the Elkinsville Soil

Parent material: Loess and loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Properties and Qualities of the Millstone Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

EesC2—Elkinsville-Millstone silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Stream terraces
Position on the landform: Risers

Map Unit Composition

Elkinsville and similar soils: 44 percent
Millstone and similar soils: 43 percent

Elkinsville, severely eroded, and similar soils on risers: 5 percent
Millstone, severely eroded, and similar soils on risers: 5 percent
The moderately well drained Sciotoville and similar soils on treads: 3 percent

Interpretive Groups

Land capability classification: Elkinsville—3e; Millstone—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Elkinsville Soil

Parent material: Loess and loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Millstone Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

EesD2—Elkinsville-Millstone silt loams, 12 to 18 percent slopes, eroded

Setting

Landform: Stream terraces
Position on the landform: Risers

Map Unit Composition

Elkinsville and similar soils: 44 percent
Millstone and similar soils: 44 percent
Elkinsville, severely eroded, and similar soils on risers: 5 percent
Millstone, severely eroded, and similar soils on risers: 5 percent
The well drained Haymond and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: Elkinsville—4e; Millstone—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Elkinsville Soil

Parent material: Loess and loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Millstone Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

EesFQ—Elkinsville-Millstone silt loams, 18 to 40 percent slopes, rarely flooded

Setting

Landform: Stream terraces
Position on the landform: Risers

Map Unit Composition

Elkinsville and similar soils: 48 percent
Millstone and similar soils: 47 percent
The well drained Haymond and similar soils on flood plains: 5 percent

Interpretive Groups

Land capability classification: Elkinsville—7e; Millstone—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Elkinsville Soil

Parent material: Loess and loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Millstone Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

EsaG—Eden silty clay loam, 25 to 60 percent slopes, very rocky

Setting

Landform: Hills underlain with interbedded limestone and shale
Position on the landform: Backslopes

Map Unit Composition

Eden and similar soils: 74 percent
The well drained Carmel and similar soils on shoulders and backslopes: 14 percent
Rock outcrop on escarpments: 8 percent
The well drained Caneyville and similar soils on backslopes: 2 percent
The well drained Dearborn and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Eden Soil

Parent material: Clayey residuum over Ordovician shale and limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 4.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 8.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

GgbG—Gilwood-Brownstown silt loams, 25 to 75 percent slopes

Setting

Landform: Hills and knobs underlain with siltstone
Position on the landform: Backslopes

Map Unit Composition

Gilwood and similar soils: 45 percent
Brownstown and similar soils: 35 percent

The well drained, strongly sloping Wrays and similar soils on backslopes and shoulders: 10 percent
Gilwood and similar soils that have slopes of 12 to 18 percent (on backslopes and shoulders): 3 percent
Shallow, well drained, loamy soils on backslopes: 3 percent
The well drained Beanblossom and similar soils on narrow flood plains or alluvial fans: 2 percent
Rock outcrop on escarpments: 2 percent

Interpretive Groups

Land capability classification: Gilwood—7e; Brownstown—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gilwood Soil

Parent material: Loamy residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Brownstown Soil

Parent material: Loamy-skeletal residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderately rapid
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GgfD—Gilwood-Wrays silt loams, 6 to 18 percent slopes

Setting

Landform: Hills and knobs underlain with siltstone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Gilwood and similar soils: 39 percent
Wrays and similar soils: 38 percent
The moderately well drained Spickert and similar soils on shoulders and backslopes: 10 percent
The well drained Brownstown and similar soils on backslopes: 7 percent
Gilwood, severely eroded, and similar soils on shoulders and backslopes: 3 percent
The well drained Wrays, severely eroded, and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: Gilwood—4e; Wrays—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gilwood Soil

Parent material: Loamy residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Wrays Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete

Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GgfE2—Gilwood-Wrays silt loams, 12 to 25 percent slopes, eroded

Setting

Landform: Hills and knobs underlain with siltstone
Position on the landform: Backslopes

Map Unit Composition

Gilwood and similar soils: 42 percent
Wrays and similar soils: 36 percent
The well drained Brownstown and similar soils on backslopes: 6 percent
The well drained Knobcreek and similar soils on backslopes: 5 percent
The well drained Beanblossom and similar soils on alluvial fans and flood plains: 4 percent
Gilwood, severely eroded, and similar soils on backslopes: 3 percent
The moderately well drained Spickert and similar soils on shoulders and backslopes: 2 percent
Wrays, severely eroded, and similar soils on shoulders and backslopes: 2 percent

Interpretive Groups

Land capability classification: Gilwood—6e; Wrays—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gilwood Soil

Parent material: Loamy residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Wrays Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GmaG—Gnawbone-Kurtz silt loams, 20 to 60 percent slopes

Setting

Landform: Hills underlain with siltstone and shale
Position on the landform: Backslopes

Map Unit Composition

Gnawbone and similar soils: 48 percent
Kurtz and similar soils: 32 percent
The moderately well drained Coolville and similar soils on shoulders and backslopes: 8 percent
The well drained Wellrock and similar soils on shoulders and backslopes: 4 percent
The well drained Beanblossom and similar soils on alluvial fans and flood plains: 3 percent
The moderately well drained Stonehead and similar soils on shoulders and backslopes: 3 percent
Well drained, very deep, loamy, colluvial soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: Gnawbone—7e; Kurtz—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gnawbone Soil

Parent material: Loamy residuum over Mississippian siltstone and shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 6.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Kurtz Soil

Parent material: Loamy residuum over Mississippian siltstone and shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Impermeable to moderate
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GyaD2—Grayford silt loam, 12 to 25 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Grayford and similar soils: 73 percent
The well drained Ryker and similar soils on shoulders and backslopes: 10 percent
The well drained Grayford, severely eroded, and similar soils on backslopes: 5 percent
The well drained Haggatt and similar soils on backslopes: 5 percent
The well drained Caneyville and similar soils on backslopes: 3 percent
The well drained Crider and similar soils on shoulders and backslopes: 3 percent
The well drained Hickory and similar soils on backslopes: 1 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric

Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GyaD3—Grayford silt loam, 12 to 25 percent slopes, severely eroded

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Grayford and similar soils: 78 percent
The well drained Ryker and similar soils on shoulders and backslopes: 10 percent
The well drained Haggatt and similar soils on backslopes: 5 percent
The well drained Caneyville and similar soils on backslopes: 3 percent
The well drained Crider and similar soils on shoulders and backslopes: 3 percent
The well drained Hickory and similar soils on backslopes: 1 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GyaD5—Grayford silt loam, 12 to 25 percent slopes, gullied

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Backslopes

Microfeature: Between 50 and 90 percent of this map unit is gullied. The gullied areas consist of a network of both U-shaped and V-shaped gullies averaging between 2 and 6 feet in depth.

Map Unit Composition

Grayford, gullied, and similar soils: 65 percent
The well drained Haggatt, gullied, and similar soils on backslopes: 10 percent
The well drained Ryker and similar soils on shoulders and backslopes: 10 percent
Gullied land and similar areas on backslopes and shoulders: 7 percent
The well drained Caneyville, gullied, and similar soils on backslopes: 5 percent
The well drained Crider and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GykD2—Grayford silt loam, karst, hilly, eroded

Setting

Landform: Sinkholes on Illinoian till plains underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Grayford, karst, and similar soils: 69 percent
The well drained Ryker, karst, and similar soils on shoulders and backslopes: 10 percent
The well drained Crider, karst, and similar soils on shoulders and backslopes: 5 percent
Grayford, karst, severely eroded, and similar soils on backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
The well drained Caneyville, karst, and similar soils on shoulders and backslopes: 3 percent

The well drained Haggatt, karst, and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

GykD3—Grayford silt loam, karst, hilly, severely eroded

Setting

Landform: Sinkholes on Illinoian till plains underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Grayford, karst, and similar soils: 74 percent
The well drained Ryker and similar soils on shoulders and backslopes: 10 percent
The well drained Haggatt and similar soils on shoulders and backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
The well drained Caneyville and similar soils on backslopes: 3 percent
The well drained Crider and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High

Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HcaA—Hatfield silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads

Map Unit Composition

Hatfield and similar soils: 90 percent
The moderately well drained Sciotoville and similar soils on treads: 6 percent
The poorly drained Ginat and similar soils in slight depressions: 4 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Hatfield Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

HccB2—Haubstadt silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Lake plains
Position on the landform: Shoulders, backslopes, and summits

Map Unit Composition

Haubstadt and similar soils: 84 percent
The somewhat poorly drained Dubois and similar soils on shoulders, backslopes, and summits: 10 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 4 percent
The moderately well drained Haubstadt and similar soils that have slopes of 6 to 12 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Haubstadt Soil

Parent material: Loess and the underlying paleosol that formed in loamy lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 20 to 40 inches to a fragipan
Available water capacity: About 8.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

HcdC2—Haubstadt-Shircliff silt loams, 6 to 15 percent slopes, eroded

Setting

Landform: Lake plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Haubstadt and similar soils: 55 percent
Shircliff and similar soils: 23 percent
Haubstadt, severely eroded, and similar soils on backslopes and shoulders: 10 percent
Shircliff, severely eroded, and similar soils on backslopes and shoulders: 5 percent
The well drained Markland and similar soils on backslopes: 4 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent

Interpretive Groups

Land capability classification: Haubstadt—3e; Shircliff—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haubstadt Soil

Parent material: Loess and the underlying paleosol that formed in loamy lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 20 to 40 inches to a fragipan
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Shircliff Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HceC3—Haubstadt-Shircliff complex, 6 to 15 percent slopes, severely eroded

Setting

Landform: Lake plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Haubstadt and similar soils: 55 percent
Shircliff and similar soils: 23 percent
Haubstadt, eroded, and similar soils on backslopes and shoulders: 10 percent
Shircliff, eroded, and similar soils on backslopes and shoulders: 5 percent
The well drained Markland and similar soils on backslopes: 4 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent

Interpretive Groups

Land capability classification: Haubstadt—4e; Shircliff—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haubstadt Soil

Parent material: Loess and the underlying paleosol that formed in loamy lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 12 to 20 inches to a fragipan
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Shircliff Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HcgAH—Haymond silt loam, 0 to 2 percent slopes, frequently flooded, brief duration

Setting

Landform: Flood plains and natural levees

Map Unit Composition

Haymond and similar soils: 85 percent
The well drained Wirt and similar soils on flood plains and natural levees: 10 percent
The moderately well drained Wilbur and similar soils on flood plains: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season

Properties and Qualities of the Haymond Soil

Parent material: Silty over loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Frequent (January, February, March, April)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

HcgAV—Haymond silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration

Setting

Landform: Flood plains

Map Unit Composition

Haymond and similar soils: 85 percent
The well drained Wirt and similar soils on flood plains: 10 percent
The moderately well drained Wilbur and similar soils on flood plains: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season

Properties and Qualities of the Haymond Soil

Parent material: Silty over loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Frequent (January, February, March, April) (fig. 6)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

HcgAW—Haymond silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains, flood-plain steps, and natural levees

Map Unit Composition

Haymond and similar soils: 82 percent
The well drained Wirt and similar soils on flood plains and flood-plain steps: 10 percent
The moderately well drained Wilbur and similar soils on flood plains and flood-plain steps: 5 percent
Haymond, frequently flooded, very brief duration, and similar soils on flood plains: 3 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Haymond Soil

Parent material: Silty over loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low

Figure 6.—Flooding along the Muddy Fork near Deam Lake. Pictured is an area of Haymond silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration.

Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

HerE—Hickory-Bonnell complex, 12 to 25 percent slopes

Setting

Landform: Illinoian till plains
Position on the landform: Backslopes

Map Unit Composition

Hickory and similar soils: 45 percent
Bonnell and similar soils: 38 percent
Hickory and similar soils that have slopes of more than 35 percent (on backslopes): 5 percent
The moderately well drained Blocher and similar soils on shoulders and backslopes: 3 percent

The moderately well drained Cincinnati and similar soils on shoulders and backslopes: 3 percent
The somewhat poorly drained Holton and similar soils in narrow drainageways: 3 percent
The well drained Rohan and similar soils on the lower part of backslopes: 2 percent
The well drained Jessietown and similar soils on the lower part of backslopes: 1 percent

Interpretive Groups

Land capability classification: Hickory—6e; Bonnell—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Bonnell Soil

Parent material: Loess and clayey till
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Slow to moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HtwD2—Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Haggatt and similar soils: 51 percent
Caneyville and similar soils: 31 percent
The well drained Crider and similar soils on shoulders and backslopes: 5 percent
Haggatt, severely eroded, and similar soils on backslopes: 5 percent
Caneyville, severely eroded, and similar soils on backslopes: 3 percent
Rock outcrop on escarpments: 3 percent
The well drained Grayford and similar soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: Haggatt—4e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None

Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HtzD3—Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Haggatt and similar soils: 51 percent
Caneyville and similar soils: 41 percent
The well drained Crider and similar soils on shoulders and backslopes: 3 percent
Rock outcrop on escarpments: 3 percent
The well drained Grayford and similar soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: Haggatt—6e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Available water capacity: About 3.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HufAK—Huntington silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration

Setting

Landform: Flood plains and natural levees

Map Unit Composition

Huntington and similar soils: 85 percent
Huntington, frequently flooded, and similar soils on flood plains: 10 percent
The moderately well drained Lindside, occasionally flooded, and similar soils on flood plains: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Huntington Soil

Parent material: Fine-silty alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June) (fig. 7)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Figure 7.—An area of Huntington silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration.

HuhD2—Haggatt-Caneyville silt loams, karst, hilly, eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Haggatt, karst, and similar soils: 46 percent
Caneyville, karst, and similar soils: 31 percent
Caneyville, karst, severely eroded, and similar soils on backslopes and shoulders: 5 percent
Haggatt, karst, severely eroded, and similar soils on backslopes and shoulders: 5 percent
The well drained Crider, karst, and similar soils on shoulders and backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
Rock outcrop on escarpments: 3 percent

Interpretive Groups

Land capability classification: Haggatt—4e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow to rapid
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

HujD3—Haggatt-Caneyville complex, karst, hilly, severely eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Haggatt, karst, and similar soils: 46 percent
Caneyville, karst, and similar soils: 39 percent
The well drained Crider, karst, and similar soils on shoulders and backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent
Rock outcrop on escarpments: 5 percent

Interpretive Groups

Land capability classification: Haggatt—6e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow to rapid
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

JaeB2—Jennings silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with shale bedrock
Position on the landform: Shoulders, summits, and backslopes

Map Unit Composition

Jennings and similar soils: 80 percent
The moderately well drained Deputy and similar soils on shoulders and summits: 12 percent
The moderately well drained Cincinnati and similar soils on shoulders and backslopes: 6 percent
Somewhat poorly drained, very deep, silty soils on shoulders and backslopes: 2 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Jennings Soil

Parent material: Loess, the underlying paleosol that formed in loamy till, and clayey residuum over black shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 32 inches to a fragipan; 60 to 90 inches to lithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

JafC2—Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with shale bedrock
Position on the landform: Shoulders and backslopes

Map Unit Composition

Jennings and similar soils: 45 percent
Blocher, hard bedrock substratum, and similar soils: 30 percent
Jennings, severely eroded, and similar soils on shoulders and backslopes: 8 percent
Blocher, hard bedrock substratum, severely eroded, and similar soils on shoulders and backslopes: 7 percent

The moderately well drained Deputy and similar soils on shoulders and backslopes: 7 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent

Interpretive Groups

Land capability classification: Jennings—3e; Blocher, hard bedrock substratum—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Jennings Soil

Parent material: Loess, the underlying paleosol that formed in loamy till, and clayey residuum over black shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 32 inches to a fragipan; 60 to 90 inches to lithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Blocher Soil

Parent material: Loess and loamy and clayey till over black shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 60 to 80 inches to lithic bedrock
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

JafC3—Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, severely eroded

Setting

Landform: Illinoian till plains underlain with shale bedrock
Position on the landform: Shoulders and backslopes

Map Unit Composition

Jennings and similar soils: 45 percent
Blocher, hard bedrock substratum, and similar soils: 30 percent
Jennings, eroded, and similar soils on shoulders and backslopes: 8 percent
Blocher, hard bedrock substratum, eroded, and similar soils on shoulders and backslopes: 7 percent
The moderately well drained Deputy and similar soils on shoulders and backslopes: 7 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 3 percent

Interpretive Groups

Land capability classification: Jennings—4e; Blocher, hard bedrock substratum—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Jennings Soil

Parent material: Loess, the underlying paleosol that formed in loamy till, and clayey residuum over black shale
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 15 to 20 inches to a fragipan; 60 to 90 inches to lithic bedrock
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Blocher Soil

Parent material: Loess and loamy and clayey till over black shale
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 60 to 80 inches to lithic bedrock

Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2.0 feet (January, February, March, April, December)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxkC2—Knobcreek-Navilleton silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Knobcreek and similar soils: 37 percent
Navilleton and similar soils: 35 percent
The well drained Haggatt and similar soils on shoulders and backslopes: 10 percent
The well drained Caneyville and similar soils on backslopes: 5 percent
The well drained Crider and similar soils on shoulders and backslopes: 5 percent
Moderately well drained, very deep, silty soils on shoulders and backslopes: 5 percent
The moderately well drained Bedford and similar soils on shoulders and backslopes: 3 percent

Interpretive Groups

Land capability classification: Knobcreek—3e; Navilleton—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High

Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Navilleton Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxIC3—Knobcreek-Haggatt-Caneyville complex, 6 to 12 percent slopes, severely eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Knobcreek and similar soils: 33 percent
Haggatt and similar soils: 26 percent
Caneyville and similar soils: 24 percent
The well drained Navilleton and similar soils on shoulders and backslopes: 10 percent
The well drained Crider and similar soils on shoulders and backslopes: 7 percent

Interpretive Groups

Land capability classification: Knobcreek—4e; Haggatt—4e; Caneyville—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric

Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxlE3—Knobcreek-Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Knobcreek and similar soils: 35 percent
Haggatt and similar soils: 22 percent
Caneyville and similar soils: 21 percent
The well drained Navilleton and similar soils on shoulders and backslopes: 10 percent
The well drained Crider and similar soils on shoulders and backslopes: 5 percent
Well drained, very deep, loamy, colluvial soils on footslopes: 5 percent
The well drained Beanblossom, hard bedrock substratum, and similar soils in narrow drainageways: 2 percent

Interpretive Groups

Land capability classification: Knobcreek—6e; Haggatt—6e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 5.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.1 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxmE2—Knobcreek-Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded

Setting

Landform: Hills underlain with limestone
Position on the landform: Backslopes

Map Unit Composition

Knobcreek and similar soils: 33 percent
Haggatt and similar soils: 22 percent
Caneyville and similar soils: 20 percent
Well drained, very deep, loamy, colluvial soils on footslopes: 15 percent
The well drained Crider and similar soils on shoulders: 10 percent

Interpretive Groups

Land capability classification: Knobcreek—4e; Haggatt—4e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High

Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Silty material and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderately rapid
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxoC2—Knobcreek-Navilleton-Haggatt silt loams, karst, rolling, eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Summits, backslopes, and shoulders

Map Unit Composition

Knobcreek, karst, and similar soils: 29 percent
Navilleton, karst, and similar soils: 28 percent

Haggatt, karst, and similar soils: 27 percent
The well drained Caneyville, karst, and similar soils on shoulders and backslopes: 9 percent
The well drained Crider, karst, and similar soils on summits and shoulders: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 2 percent

Interpretive Groups

Land capability classification: Knobcreek—3e; Navilleton—3e; Haggatt—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Navilleton Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

KxpD2—Knobcreek-Haggatt-Caneyville silt loams, karst, hilly, eroded

Setting

Landform: Sinkholes on hills underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Knobcreek, karst, and similar soils: 35 percent
Haggatt, karst, and similar soils: 31 percent
Caneyville, karst, and similar soils: 30 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 4 percent

Interpretive Groups

Land capability classification: Knobcreek—4e; Haggatt—4e; Caneyville—6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Knobcreek Soil

Parent material: Loess and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Haggatt Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate

Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Caneyville Soil

Parent material: Loess and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow to rapid
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

LpoAK—Lindside silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration

Setting

Landform: Flood plains

Map Unit Composition

Lindside and similar soils: 82 percent
The somewhat poorly drained Newark and similar soils on flood plains: 10 percent
The well drained Huntington and similar soils on flood plains and natural levees: 8 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Lindside Soil

Parent material: Silty over loamy alluvium
Drainage class: Moderately well drained

Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

McgC2—Markland silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Lake plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Markland and similar soils: 74 percent
Markland, severely eroded, and similar soils on backslopes and shoulders: 10 percent
The moderately well drained Percell and similar soils on backslopes and shoulders: 8 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 5 percent
Markland and similar soils that have slopes of 12 to 18 percent (on backslopes): 3 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Markland Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate

Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

McnGQ—Markland silt loam, 18 to 50 percent slopes, rarely flooded

Setting

Landform: Lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 90 percent
Markland and similar soils that have slopes of 12 to 18 percent (on shoulders and backslopes): 10 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Markland Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

McpC3—Markland silty clay loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Lake plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Markland and similar soils: 61 percent
Markland, eroded, and similar soils on shoulders and backslopes: 18 percent

The moderately well drained Percell and similar soils on shoulders and backslopes: 11 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 5 percent
Markland, rarely flooded, and similar soils that have slopes of 12 to 18 percent (on backslopes): 3 percent
The moderately well drained Wilbur and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Markland Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

McuDQ—Markland silty clay loam, 12 to 25 percent slopes, severely eroded, rarely flooded

Setting

Landform: Lake plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

Markland and similar soils: 70 percent
Markland, eroded, and similar soils on shoulders and backslopes: 25 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 5 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Markland Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate

Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

MdqDQ—Markland silt loam, 12 to 25 percent slopes, eroded, rarely flooded

Setting

Landform: Lake plains
Position on the landform: Backslopes

Map Unit Composition

Markland and similar soils: 85 percent
Markland, severely eroded, and similar soils on backslopes and shoulders: 10 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 5 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Markland Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

MhuA—McGary silt loam, 0 to 2 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits

Map Unit Composition

McGary and similar soils: 93 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 7 percent

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the McGary Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Very slow to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

MhyA—Medora silt loam, 0 to 2 percent slopes

Setting

Landform: Eskers
Position on the landform: Summits

Map Unit Composition

Medora and similar soils: 85 percent
The well drained Parke and similar soils on summits: 15 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Medora Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in outwash
Drainage class: Moderately well drained

Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 24 to 36 inches to a fragipan
Available water capacity: About 7.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.7 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

MhyB2—Medora silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Eskers
Position on the landform: Shoulders and summits

Map Unit Composition

Medora and similar soils: 88 percent
The well drained Parke and similar soils on shoulders and summits: 10 percent
Medora and similar soils that have slopes of 6 to 12 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Medora Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in outwash
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 6.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.7 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

MhyC2—Medora silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Eskers
Position on the landform: Backslopes and shoulders

Map Unit Composition

Medora and similar soils: 73 percent
Medora, severely eroded, and similar soils on backslopes and shoulders: 15 percent
The well drained Parke and similar soils on backslopes and shoulders: 10 percent
Medora and similar soils that have slopes of 2 to 6 percent (on summits and shoulders): 2 percent

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Medora Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in outwash
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderate
Depth to restrictive feature: 20 to 36 inches to a fragipan
Available water capacity: About 6.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.7 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

MhyC3—Medora silt loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Eskers
Position on the landform: Shoulders and backslopes

Map Unit Composition

Medora and similar soils: 75 percent
Medora, eroded, and similar soils on shoulders and backslopes: 15 percent
The well drained Parke and similar soils on shoulders and backslopes: 10 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Medora Soil

Parent material: Loess, loamy materials, and the underlying paleosol that formed in outwash
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Moderately slow or moderate
Depth to restrictive feature: 12 to 20 inches to a fragipan
Available water capacity: About 6.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

MsvA—Montgomery silty clay loam, 0 to 1 percent slopes

Setting

Landform: Depressions on lake plains

Map Unit Composition

Montgomery and similar soils: 82 percent
The very poorly drained, undrained Montgomery soils and similar soils in depressions: 5 percent
Montgomery, overwash, and similar soils: 5 percent
The poorly drained Zipp and similar soils on flats and in depressions: 5 percent
The somewhat poorly drained McGary and similar soils on summits: 3 percent

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Montgomery Soil

Parent material: Clayey lacustrine deposits
Drainage class: Poorly drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: High

Depth and months of the highest apparent seasonal high water table: At the surface (January, February, March)
Frequency and most likely period of ponding: Frequent (January, February, March, April, May, December)
Flooding: None
Hydric soil status: Hydric
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

NaaA—Nabb silt loam, 0 to 2 percent slopes

Setting

Landform: Illinoian till plains
Position on the landform: Summits

Map Unit Composition

Nabb and similar soils: 85 percent
The somewhat poorly drained Avonburg and similar soils on summits: 15 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Nabb Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 24 to 40 inches to a fragipan
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

NaaB2—Nabb silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Illinoian till plains
Position on the landform: Shoulders, summits, and backslopes

Map Unit Composition

Nabb and similar soils: 78 percent
The moderately well drained Cincinnati and similar soils on summits, shoulders, and backslopes: 10 percent
The somewhat poorly drained Avonburg and similar soils on shoulders and backslopes: 8 percent
The somewhat poorly drained Wakeland and similar soils in narrow drainageways: 4 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Nabb Soil

Parent material: Loess and the underlying paleosol that formed in loamy till
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow or slow
Depth to restrictive feature: 24 to 40 inches to a fragipan
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

NbhAK—Newark silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration

Setting

Landform: Flood plains

Map Unit Composition

Newark and similar soils: 80 percent
The moderately well drained Lindside, occasionally flooded, and similar soils on flood plains: 15 percent
The poorly drained Wilhite, occasionally flooded, and similar soils in backswamps: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Newark Soil

Parent material: Silty over loamy alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

OfbAW—Oldenburg loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains and flood-plain steps

Map Unit Composition

Oldenburg and similar soils: 85 percent
The somewhat poorly drained Holton and similar soils on flood plains: 10 percent
Oldenburg, frequently flooded, and similar soils on flood plains: 5 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Oldenburg Soil

Parent material: Loamy alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Moderate or moderately rapid
Permeability below a depth of 40 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June) (fig. 8)

Figure 8.—Oldenburg soils are common in small drainageways on the Illinoian till plain. These soils are subject to occasional flooding.

Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

PcrB2—Pekin silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Stream terraces
Position on the landform: Treads

Map Unit Composition

Pekin and similar soils: 85 percent
The somewhat poorly drained Bartle and similar soils on treads: 10 percent
The well drained Elkinsville and similar soils on risers: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Pekin Soil

Parent material: Loess and silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

PcrC2—Pekin silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Stream terraces
Position on the landform: Risers

Map Unit Composition

Pekin and similar soils: 72 percent
Pekin, severely eroded, and similar soils on risers: 14 percent
The well drained Elkinsville and similar soils on risers: 5 percent
Pekin and similar soils that have slopes of 12 to 18 percent (on risers): 5 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 4 percent

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Pekin Soil

Parent material: Loess and silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric

Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

PcrC3—Pekin silt loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Stream terraces
Position on the landform: Risers

Map Unit Composition

Pekin and similar soils: 71 percent
Pekin, eroded, and similar soils on risers: 15 percent
The well drained Elkinsville and similar soils on risers: 5 percent
Pekin and similar soils that have slopes of 12 to 18 percent (on risers): 5 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 4 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Pekin Soil

Parent material: Loess and silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Very slow to moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

PhaA—Peoga silt loam, 0 to 1 percent slopes

Setting

Landform: Stream terraces or lake plains
Position on the landform: Treads or summits

Map Unit Composition

Peoga and similar soils: 83 percent
Peoga, undrained, and similar soils on treads or summits: 10 percent
Dubois and similar soils on summits: 5 percent
The somewhat poorly drained Bartle and similar soils on treads: 2 percent

Interpretive Groups

Land capability classification: 3w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Peoga Soil

Parent material: Loess and silty alluvium; or loess and the underlying paleosol that formed in loamy lacustrine deposits
Drainage class: Poorly drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest perched seasonal high water table: At the surface (January, February, March)
Frequency and most likely period of ponding: Frequent (January, February, March, April, May, December)
Flooding: None
Hydric soil status: Hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Pml—Pits, quarry

Setting

Landform: Hills underlain with limestone

Map Unit Composition

Pits, quarry: 85 percent
Udorthents and similar soils: 10 percent
Water: 5 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

- This map unit consists of areas where the surface soil has been removed and limestone bedrock has been extracted for use as construction material. Most of the area is the actual pit, and some of the area consists of piles of broken rock or mixed rock and soil material.

Ppu—Pits, sand and gravel

Setting

Landform: Stream terraces

Map Unit Composition

Pits, sand and gravel: 80 percent
Udorthents, loamy, and similar soils: 10 percent
Water: 10 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

- This map unit consists of areas where the surface soil has been removed and sand, gravel, or both have been extracted for use as construction material. Most of the area is the actual pit, and some of the area consists of stockpiles of stripped soil material.

RblD3—Rarden silty clay loam, 12 to 18 percent slopes, severely eroded

Setting

Landform: Hills underlain with shale or siltstone
Position on the landform: Backslopes

Map Unit Composition

Rarden and similar soils: 78 percent
Rarden, eroded, and similar soils on shoulders and backslopes: 10 percent
The moderately well drained Coolville and similar soils on shoulders and backslopes: 5 percent
The well drained Deam and similar soils on backslopes: 5 percent
The moderately well drained Blocher, soft bedrock substratum, and similar soils on shoulders and backslopes: 2 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Rarden Soil

Parent material: Clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Impermeable to moderately slow
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 4.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)

Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

RbmD5—Rarden silty clay, 6 to 18 percent slopes, gullied

Setting

Landform: Hills underlain with shale or siltstone
Position on the landform: Backslopes and shoulders
Microfeature: Between 50 and 80 percent of this map unit is gullied. The gullied areas consist of a network of both U-shaped and V-shaped gullies averaging between 2 and 6 feet in depth.

Map Unit Composition

Rarden, gullied, and similar soils: 74 percent
The moderately well drained Coolville and similar soils on shoulders and backslopes: 12 percent
Rarden, eroded, and similar soils on shoulders and backslopes: 12 percent
The well drained Deam and similar soils on backslopes: 2 percent

Interpretive Groups

Land capability classification: 7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gullied Rarden Soil

Parent material: Clayey residuum over Mississippian shale and siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Impermeable to slow
Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 2.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 0.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.0 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

RptG—Rohan-Jessietown complex, 25 to 60 percent slopes, rocky

Setting

Landform: Hills underlain with shale
Position on the landform: Backslopes

Map Unit Composition

Rohan and similar soils: 45 percent
Jessietown and similar soils: 36 percent
Rock outcrop on escarpments: 8 percent
Rohan, severely eroded, and similar soils on backslopes: 5 percent
The well drained Hickory and similar soils on the upper backslopes: 3 percent
The well drained Trappist and similar soils on backslopes: 3 percent

Interpretive Groups

Land capability classification: Rohan—7e; Jessietown—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Rohan Soil

Parent material: Loamy-skeletal residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Available water capacity: About 1.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Jessietown Soil

Parent material: Loess and residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High

Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

RtcA—Ryker silt loam, 0 to 2 percent slopes

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Summits

Map Unit Composition

Ryker and similar soils: 95 percent
The moderately well drained Cincinnati and similar soils on summits: 5 percent

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 80 to 120 inches to lithic bedrock
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

RtcB2—Ryker silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Summits and shoulders

Map Unit Composition

Ryker and similar soils: 92 percent
The moderately well drained Cincinnati and similar soils on summits and shoulders: 5 percent
Ryker and similar soils that have slopes of 6 to 12 percent slopes (on backslopes and shoulders): 3 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 80 to 120 inches to lithic bedrock
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

RzrB2—Ryker silt loam, karst, undulating, eroded

Setting

Landform: Sinkholes on Illinoian till plains underlain with limestone
Position on the landform: Summits and shoulders

Map Unit Composition

Ryker, karst, and similar soils: 82 percent
The moderately well drained Wilbur, depressional, and similar soils on toeslopes: 10 percent
The moderately well drained Cincinnati and similar soils on summits and shoulders: 5 percent
Ryker, karst, and similar soils that have slopes of 12 to 18 percent (on backslopes and shoulders): 3 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None

Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

RztC2—Ryker-Grayford silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Ryker and similar soils: 43 percent
Grayford and similar soils: 25 percent
The moderately well drained Cincinnati and similar soils on backslopes and shoulders: 12 percent
The well drained Crider and similar soils on backslopes and shoulders: 10 percent
The well drained Caneyville and similar soils on backslopes: 5 percent
The well drained Haggatt and similar soils on backslopes and shoulders: 5 percent

Interpretive Groups

Land capability classification: Ryker—3e; Grayford—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

RztC3—Ryker-Grayford silt loams, 6 to 12 percent slopes, severely eroded

Setting

Landform: Illinoian till plains underlain with limestone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Ryker and similar soils: 44 percent
Grayford and similar soils: 28 percent
The moderately well drained Cincinnati and similar soils on backslopes and shoulders: 10 percent
The well drained Crider and similar soils on backslopes and shoulders: 8 percent
The well drained Caneyville and similar soils on backslopes: 5 percent
The well drained Haggatt and similar soils on backslopes and shoulders: 5 percent

Interpretive Groups

Land capability classification: Ryker—4e; Grayford—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Slow to moderately rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

RzvC2—Ryker-Grayford silt loams, karst, rolling, eroded

Setting

Landform: Sinkholes on Illinoian till plains underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Ryker, karst, and similar soils: 41 percent
Grayford, karst, and similar soils: 26 percent
The moderately well drained Cincinnati and similar soils on shoulders and summits: 10 percent
The well drained Crider and similar soils on shoulders and backslopes: 8 percent
The well drained Caneyville and similar soils on shoulders and backslopes: 5 percent
The well drained Haggatt and similar soils on shoulders and backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent

Interpretive Groups

Land capability classification: Ryker—3e; Grayford—3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 10.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric

Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

RzvC3—Ryker-Grayford silt loams, karst, rolling, severely eroded

Setting

Landform: Sinkholes on Illinoian till plains underlain with limestone
Position on the landform: Shoulders and backslopes

Map Unit Composition

Ryker, karst, and similar soils: 41 percent
Grayford, karst, and similar soils: 26 percent
The moderately well drained Cincinnati and similar soils on shoulders and summits: 10 percent
The well drained Crider and similar soils on shoulders and backslopes: 8 percent
The well drained Caneyville and similar soils on shoulders and backslopes: 5 percent
The well drained Haggatt and similar soils on shoulders and backslopes: 5 percent
The well drained Haymond, depressional, and similar soils on toeslopes: 5 percent

Interpretive Groups

Land capability classification: Ryker—4e; Grayford—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Ryker Soil

Parent material: Loess, loamy till, and clayey residuum
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Available water capacity: About 9.8 inches to a depth of 60 inches

Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Grayford Soil

Parent material: Loess, loamy till, and clayey residuum over limestone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderately slow to rapid
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: High
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

SceB2—Scottsburg silt loam, 2 to 4 percent slopes, eroded

Setting

Landform: Strath terraces underlain with shale
Position on the landform: Treads

Map Unit Composition

Scottsburg and similar soils: 96 percent
The moderately well drained Deputy and similar soils on treads and risers: 2 percent
The well drained Trappist and similar soils on risers: 2 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Scottsburg Soil

Parent material: Loess, loamy slope alluvium, and clayey residuum over black shale bedrock
Drainage class: Moderately well drained

Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 60 to 80 inches to lithic bedrock
Available water capacity: About 9.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

SfyB—Shircliff silt loam, 2 to 6 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits and shoulders

Map Unit Composition

Shircliff and similar soils: 75 percent
The moderately well drained Percell and similar soils on summits and shoulders: 12 percent
The somewhat poorly drained McGary and similar soils on summits: 8 percent
The well drained Markland and similar soils on shoulders and backslopes: 5 percent

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland

Properties and Qualities of the Shircliff Soil

Parent material: Loess and clayey lacustrine deposits
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

SoaB—Spickert silt loam, 2 to 6 percent slopes

Setting

Landform: Hills underlain with siltstone
Position on the landform: Summits and shoulders

Map Unit Composition

Spickert and similar soils: 95 percent
The well drained Wrays and similar soils on summits and shoulders: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Spickert Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 36 inches to a fragipan; 60 to 80 inches to lithic bedrock
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

SodB—Spickert silt loam, terrace, 1 to 4 percent slopes

Setting

Landform: Strath terraces underlain with siltstone
Position on the landform: Treads

Map Unit Composition

Spickert, terrace, and similar soils: 90 percent
The somewhat poorly drained Bartle and similar soils on treads: 10 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Spickert Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate

Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 24 to 36 inches to a fragipan; 60 to 90 inches to lithic bedrock
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

SolC2—Spickert-Wrays silt loams, 6 to 12 percent slopes, eroded

Setting

Landform: Hills and knobs underlain with siltstone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Spickert and similar soils: 44 percent
Wrays and similar soils: 32 percent
The well drained Gilwood and similar soils on backslopes: 10 percent
Spickert, severely eroded, and similar soils on backslopes and shoulders: 7 percent
Wrays, severely eroded, and similar soils on backslopes and shoulders: 5 percent
Wrays and similar soils that have slopes of 12 to 18 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: Spickert—3e; Wrays—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Spickert Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 36 inches to a fragipan; 50 to 80 inches to lithic bedrock
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric

Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Wrays Soil

Parent material: Loess and silty residuum over Mississippian siltstone bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

StaAQ—Steff silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood-plain steps

Map Unit Composition

Steff and similar soils: 86 percent
The somewhat poorly drained Stendal and similar soils on flood-plain steps: 10 percent
The well drained Cuba and similar soils on flood-plain steps: 2 percent
Steff, occasionally flooded, and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: 1
Prime farmland category: Prime farmland

Properties and Qualities of the Steff Soil

Parent material: Acid silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Moderate or moderately rapid
Permeability below a depth of 40 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

StdAQ—Stendal silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood-plain steps

Map Unit Composition

Stendal and similar soils: 88 percent
The poorly drained Bonnie and similar soils in backswamps: 5 percent
The moderately well drained Steff and similar soils on flood-plain steps: 4 percent
Stendal, occasionally flooded, and similar soils on flood plains: 3 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Stendal Soil

Parent material: Acid silty alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Rare (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

StdAW—Stendal silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains and flood-plain steps

Map Unit Composition

Stendal and similar soils: 87 percent
The poorly drained Bonnie and similar soils in backswamps: 5 percent
The moderately well drained Steff and similar soils on flood plains and flood-plain steps: 4 percent
The poorly drained Piopolis and similar soils in backswamps: 2 percent
Stendal, frequently flooded, and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Stendal Soil

Parent material: Acid silty alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 0.5 foot (January, February, March, April, December)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

ThaC2—Trappist silt loam, 6 to 12 percent slopes, eroded

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes and shoulders

Map Unit Composition

Trappist and similar soils: 84 percent
Trappist, severely eroded, and similar soils on backslopes and shoulders: 5 percent
The moderately well drained Deputy and similar soils on backslopes and shoulders: 4 percent

The moderately well drained Scottsburg and similar soils on summits: 3 percent
The well drained Rohan and similar soils on backslopes: 2 percent
Trappist and similar soils that have slopes of 12 to 18 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ThbC3—Trappist silty clay loam, 6 to 12 percent slopes, severely eroded

Setting

Landform: Hills and strath terraces underlain with black shale
Position on the landform: Backslopes and shoulders

Map Unit Composition

Trappist and similar soils: 75 percent
Trappist, eroded, and similar soils on backslopes and shoulders: 15 percent
The moderately well drained Deputy and similar soils on backslopes and shoulders: 4 percent
The well drained Rohan and similar soils on backslopes: 2 percent
The moderately well drained Scottsburg and similar soils on summits: 2 percent
Trappist, severely eroded, and similar soils that have slopes of 12 to 18 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate

Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ThbD5—Trappist silty clay loam, 6 to 18 percent slopes, gullied

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes and shoulders
Microfeature: Between 50 and 90 percent of this map unit is gullied. The gullied areas consist of a network of both U-shaped and V-shaped gullies averaging between 2 and 6 feet in depth.

Map Unit Composition

Trappist, gullied, and similar soils: 73 percent
The moderately well drained Deputy, gullied, and similar soils on backslopes and shoulders: 12 percent
Trappist, eroded, and similar soils on backslopes and shoulders: 8 percent
The well drained Rohan and similar soils on backslopes: 7 percent

Interpretive Groups

Land capability classification: 6e
Prime farmland category: Not prime farmland

Properties and Qualities of the Gullied Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete

Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ThcD3—Trappist-Rohan complex, 12 to 25 percent slopes, severely eroded

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes

Map Unit Composition

Trappist and similar soils: 44 percent
Rohan and similar soils: 29 percent
Trappist, eroded, and similar soils on backslopes: 10 percent
The moderately well drained Deputy and similar soils on backslopes and shoulders: 5 percent
Rohan, eroded, and similar soils on backslopes: 5 percent
Trappist, eroded, and similar soils that have slopes of 12 to 18 percent (on shoulders): 5 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: Trappist—6e; Rohan—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Rohan Soil

Parent material: Loamy-skeletal residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Available water capacity: About 1.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

ThdD—Trappist-Rohan silt loams, 12 to 25 percent slopes

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes

Map Unit Composition

Trappist and similar soils: 49 percent
Rohan and similar soils: 33 percent
The moderately well drained Deputy and similar soils on backslopes and shoulders: 10 percent
Trappist, severely eroded, and similar soils on backslopes: 4 percent
Rohan, severely eroded, and similar soils on backslopes: 2 percent
The somewhat poorly drained Stendal and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: Trappist—4e; Rohan—7e
Prime farmland category: Not prime farmland

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Rohan Soil

Parent material: Loamy-skeletal residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Available water capacity: About 1.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: High for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

TsaC3—Trappist-Deputy complex, 6 to 12 percent slopes, severely eroded

Setting

Landform: Hills and strath terraces underlain with shale
Position on the landform: Backslopes and shoulders

Map Unit Composition

Trappist and similar soils: 46 percent
Deputy and similar soils: 23 percent
Trappist, eroded, and similar soils on backslopes and shoulders: 15 percent
Deputy, eroded, and similar soils on backslopes and shoulders: 5 percent
The moderately well drained Jennings and similar soils on backslopes and shoulders: 5 percent
The moderately well drained Blocher, hard bedrock substratum, and similar soils on backslopes and shoulders: 4 percent
Trappist, severely eroded, and similar soils that have slopes of 12 to 18 percent (on backslopes): 2 percent

Interpretive Groups

Land capability classification: Trappist—4e; Deputy—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Trappist Soil

Parent material: Silty material and clayey residuum over black shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Available water capacity: About 3.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year

Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Deputy Soil

Parent material: Loess and clayey residuum over black shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock; 60 to 80 inches to lithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Uaa—Udorthents, cut and filled

Setting

Landform: Variable; includes hills underlain with limestone, hills underlain with siltstone and shale, stream terraces, lake plains, till plains, and flood plains

Map Unit Composition

Udorthents, cut and filled, and similar soils: 83 percent
Urban land: 8 percent
Very deep, poorly drained and somewhat poorly drained soils in depressions: 5 percent
Rock outcrop on escarpments: 4 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

- These soils generally consist of mixed loamy or clayey soil materials in areas that have been borrowed for fill materials or in areas of the fill material itself. Onsite

investigation is needed to determine specific soil properties affecting selected land uses.

UaoAK—Udifluvents, cut and filled-Urban land complex, 0 to 2 percent slopes, occasionally flooded, brief duration

Setting

Landform: Flood plains

Map Unit Composition

Udifluvents, cut and filled, and similar soils: 65 percent
Urban land: 25 percent
The well drained Huntington and similar soils on flood plains and natural levees: 5 percent
The well drained McAdoo and similar soils on flood plains: 3 percent
The moderately well drained Lindside and similar soils on flood plains: 1 percent
The somewhat poorly drained Newark and similar soils on flood plains: 1 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Udifluvents, cut and filled

- These soils generally consist of mixed loamy soil materials in areas that have been filled or in areas from which material has been borrowed for fill. Onsite investigation is needed to determine specific soil properties affecting selected land uses. The soils are subject to occasional flooding, most likely during January, February, March, April, May, and June.

Urban land

- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

UedA—Urban land-Aquents, clayey substratum, complex, lake plain, 0 to 3 percent slopes

Setting

Landform: Lake plains
Position on the landform: Summits

Map Unit Composition

Urban land: 60 percent
Aquents, clayey substratum, and similar soils: 25 percent
The poorly drained Montgomery and similar soils in depressions: 6 percent
The somewhat poorly drained McGary and similar soils on summits: 3 percent
The moderately well drained Percell and similar soils on summits and shoulders: 2 percent
The moderately well drained Shircliff and similar soils on summits and shoulders: 2 percent
The poorly drained Zipp and similar soils in depressions: 2 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Urban land
- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

Aquents, clayey substratum
- These soils generally consist of clayey materials in disturbed areas. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

UndAY—Urban land-Udifluvents complex, leveed, 0 to 2 percent slopes

Setting

Landform: Flood plains

Map Unit Composition

Urban land: 65 percent
Udifluvents and similar soils: 25 percent
The well drained Huntington and similar soils on flood plains and natural levees: 5 percent
The moderately well drained Lindside and similar soils on flood plains: 3 percent
The somewhat poorly drained Newark, rarely flooded, and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Urban land
- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

Udifluvents
- These soils generally consist of alluvial materials in disturbed areas. They are subject to rare flooding, most likely during January, February, March, April, May, and June. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

UngB—Urban land-Udarents, fragipan substratum, complex, till plain, 0 to 12 percent slopes

Setting

Landform: Illinoian till plains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Urban land: 45 percent
Udarents, fragipan substratum, and similar soils: 30 percent
The somewhat poorly drained Avonburg and similar soils on summits and shoulders: 5 percent
The moderately well drained Cincinnati and similar soils on summits, shoulders, and backslopes: 4 percent
The moderately well drained Nabb and similar soils on summits and shoulders: 4 percent
The moderately well drained Blocher and similar soils on shoulders and backslopes: 3 percent
The moderately well drained Jennings and similar soils on shoulders and backslopes: 3 percent
The moderately well drained Deputy and similar soils on summits and shoulders of strath terraces: 2 percent
The moderately well drained Scottsburg and similar soils on summits and shoulders of strath terraces: 2 percent
The well drained Trappist and similar soils on backslopes of strath terraces: 2 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Urban land

- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures (fig. 9).

Udarents, fragipan substratum

- These soils occur in disturbed areas. They have a fragipan at a depth of 20 to 40 inches. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

UnkB—Urban land-Udarents, silty substratum, complex, terrace, 0 to 6 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads and risers

Map Unit Composition

Urban land: 45 percent
Udarents, silty substratum, and similar soils: 30 percent
The moderately well drained Pekin and similar soils on treads and risers: 11 percent
The somewhat poorly drained Bartle and similar soils on treads: 8 percent
The somewhat poorly drained Wakeland and similar soils on flood plains: 4 percent
The well drained Beanblossom and similar soils on flood plains: 2 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

Figure 9.—An increase in impervious surfaces results in a dramatic increase in the potential for water runoff in urban areas. Pictured is an area of Urban land-Udarents, fragipan substratum, complex, till plain, 0 to 12 percent slopes.

General Description

Urban land

- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

Udarents, silty substratum

- These soils occur in disturbed areas. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

UnpA—Urban land-Udarents, loamy substratum, complex, terrace, 0 to 3 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Treads and risers

Map Unit Composition

Urban land: 45 percent
Udarents, loamy substratum, and similar soils: 30 percent
The well drained Elkinsville and similar soils on treads and risers: 10 percent
The well drained Millstone and similar soils on treads and risers: 8 percent
The moderately well drained Sciotoville and similar soils on treads: 4 percent
The somewhat poorly drained Hatfield and similar soils on treads: 3 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Urban land
- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

Udarents, loamy substratum
- These soils occur in disturbed areas. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

UnsB—Urban land-Udarents, clayey substratum, complex, hills, 2 to 10 percent slopes

Setting

Landform: Hills underlain with limestone
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

Urban land: 41 percent
Udarents, clayey substratum, and similar soils: 31 percent
The well drained Crider and similar soils on summits and shoulders: 10 percent
The well drained Ryker and similar soils on summits and shoulders: 7 percent
The well drained Haggatt and similar soils on backslopes and shoulders: 5 percent
The moderately well drained Cincinnati and similar soils on shoulders, summits, and backslopes: 3 percent
The moderately well drained Jennings and similar soils on summits, shoulders, and backslopes: 3 percent

Interpretive Groups

Land capability classification: None assigned
Prime farmland category: Not prime farmland

General Description

Urban land
- Urban land includes areas that are covered by paved or graveled roads, parking lots and walkways, residential and commercial buildings, and cemetery structures.

Udarents, clayey substratum
- These soils occur in disturbed areas. Onsite investigation is needed to determine specific soil properties affecting selected land uses.

W—Water

- This map unit consists of natural bodies of water, such as ponds and streams.

WaaAV—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration

Setting

Landform: Flood plains

Map Unit Composition

Wakeland and similar soils: 83 percent
The poorly drained Birds and similar soils in backswamps: 10 percent
The moderately well drained Wilbur and similar soils on flood plains: 7 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Frequent (January, February, March, April)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

WaaAW—Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains and flood-plain steps

Map Unit Composition

Wakeland and similar soils: 82 percent
The poorly drained Birds and similar soils in backswamps: 10 percent
The moderately well drained Wilbur and similar soils on flood plains and flood-plain steps: 5 percent
Wakeland, frequently flooded, and similar soils on flood plains: 3 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

WedB2—Weddel silt loam, 2 to 6 percent slopes, eroded

Setting

Landform: Illinoian till plains underlain with shale or siltstone
Position on the landform: Summits and shoulders

Map Unit Composition

Weddel and similar soils: 95 percent
The moderately well drained Coolville and similar soils on backslopes and shoulders: 5 percent

Interpretive Groups

Land capability classification: 2e
Prime farmland category: Prime farmland

Properties and Qualities of the Weddel Soil

Parent material: Loess, loamy till, and the underlying paleosol that formed in clayey residuum over Mississippian shale bedrock
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to slow
Depth to restrictive feature: 60 to 90 inches to paralithic bedrock
Available water capacity: About 8.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1.5 feet (January, February, March)

Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

WhcD—Wellrock-Gnawbone silt loams, 6 to 20 percent slopes

Setting

Landform: Hills underlain with siltstone
Position on the landform: Backslopes and shoulders

Map Unit Composition

Wellrock and similar soils: 50 percent
Gnawbone and similar soils: 41 percent
The moderately well drained Spickert, soft bedrock substratum, and similar soils on backslopes and footslopes: 5 percent
The moderately well drained Coolville and similar soils on backslopes and shoulders: 4 percent

Interpretive Groups

Land capability classification: Wellrock—4e; Gnawbone—4e
Prime farmland category: Not prime farmland

Properties and Qualities of the Wellrock Soil

Parent material: Loess and loamy residuum over Mississippian siltstone and shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderately slow or moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Gnawbone Soil

Parent material: Loamy residuum over Mississippian siltstone and shale bedrock
Drainage class: Well drained
Permeability to a depth of 40 inches: Impermeable to moderate

Permeability below a depth of 40 inches: Impermeable or very slow
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

WnmA—Whitcomb silt loam, 0 to 2 percent slopes

Setting

Landform: Strath terraces underlain with shale
Position on the landform: Treads

Map Unit Composition

Whitcomb and similar soils: 87 percent
The moderately well drained Scottsburg and similar soils on treads: 10 percent
Very deep, poorly drained, silty soils on treads: 3 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where drained

Properties and Qualities of the Whitcomb Soil

Parent material: Loess, loamy slope alluvium, and clayey residuum over black shale bedrock
Drainage class: Somewhat poorly drained
Permeability to a depth of 40 inches: Very slow to moderate
Permeability below a depth of 40 inches: Impermeable to moderately slow
Depth to restrictive feature: 60 to 80 inches to lithic bedrock
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 0.5 foot (January, February, March)
Ponding: None
Flooding: None
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

WokAV—Wilbur silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration

Setting

Landform: Flood plains

Map Unit Composition

Wilbur and similar soils: 78 percent
The well drained Haymond and similar soils on flood plains: 12 percent
The somewhat poorly drained Wakeland and similar soils on flood plains: 10 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland where protected from flooding or not frequently flooded during the growing season

Properties and Qualities of the Wilbur Soil

Parent material: Silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Frequent (January, February, March, April)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

WokAW—Wilbur silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains and flood-plain steps

Map Unit Composition

Wilbur and similar soils: 83 percent
The somewhat poorly drained Wakeland and similar soils on flood plains and flood-plain steps: 10 percent
Wilbur, frequently flooded, and similar soils on flood plains: 5 percent
The well drained Haymond and similar soils on flood plains and natural levees: 2 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Wilbur Soil

Parent material: Silty alluvium
Drainage class: Moderately well drained
Permeability to a depth of 40 inches: Moderate
Permeability below a depth of 40 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 1.5 feet (January, February, March)
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

WprAW—Wirt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Setting

Landform: Flood plains and flood-plain steps

Map Unit Composition

Wirt and similar soils: 83 percent
The well drained Haymond and similar soils on natural levees, flood plains, and flood-plain steps: 10 percent
Wirt, frequently flooded, and similar soils on flood plains: 5 percent
The moderately well drained Oldenburg and similar soils on flood plains and flood-plain steps: 2 percent

Interpretive Groups

Land capability classification: 2w
Prime farmland category: Prime farmland

Properties and Qualities of the Wirt Soil

Parent material: Loamy alluvium
Drainage class: Well drained
Permeability to a depth of 40 inches: Moderate or moderately rapid
Permeability below a depth of 40 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low
Depth to seasonal high water table: More than 6.0 feet all year
Ponding: None
Frequency and most likely period of flooding: Occasional (January, February, March, April, May, June)
Hydric soil status: Not hydric
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Patricia Larr, District Conservationist, Natural Resources Conservation Service, helped prepare this section.

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils, including some not commonly grown in the survey area, are identified; the system of land capability classification used by the Natural Resources Conservation Service is explained; the estimated yields of the main crops and hay and pasture plants are listed for each soil; and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

In 2002, about 72,000 acres in Clark County, or about 30 percent of the total acreage, was used for crops, mainly corn, soybeans, and winter wheat, according to the Clark County Soil and Water Conservation District. About 25,000 acres was used for hay and pasture, which includes hayland in rotation with other crops.

The potential of the soils in Clark County for increased production of food crops is low. A small percentage of the acreage that is currently used as woodland or pasture could be converted to cropland. In addition to the reserve productive capacity represented by this land, food production can also be increased considerably by extending the latest crop production technology to all of the cropland in the county. This soil survey can greatly facilitate the application of such technology.

The paragraphs that follow describe the main management concerns affecting the use of the soils in the county for crops and pasture. These concerns are water erosion, wetness, surface cloddiness, and fertility.

Water erosion is a hazard in areas where the slope is more than about 2 percent. Loss of the surface layer through erosion reduces productivity as fertilizer, pesticides, herbicides, and organic matter are removed from the surface layer. The quality of some soils, such as Blocher, Cincinnati, Crider, Deputy, Grayford, Haggatt, and Knobcreek soils, is reduced as part of the more clayey subsoil is incorporated into the surface layer. Therefore, seedbed preparation becomes more difficult and seed germination is hindered. Loss of the surface layer is especially damaging to soils that have a fragipan or fragic soil properties in the subsoil or have bedrock within a depth of 60 inches. The root zone in these soils consists mainly of the part of the profile above the fragipan or bedrock. As the surface layer is lost, the thickness of the root zone and the available water capacity are reduced. Avonburg, Bartle, Bedford, Cincinnati, Dubois, Hatfield, Haubstadt, Jennings, Medora, Nabb, Pekin, Scottsburg, Spickert, and Whitcomb soils have a fragipan or fragic soil properties. Caneyville, Coolville, Deputy, Gilwood, Grayford, Haggatt, Rarden, Trappist, Wellrock, and Wrays soils have bedrock within a depth of 60 inches.

Erosion also results in the sedimentation and pollution of ditches, lakes, and streams. Controlling erosion minimizes sedimentation and pollution and improves water quality for fish and wildlife, for municipal use, and for recreational uses.

Planting cover crops helps to control erosion in the more sloping areas. Cover crops are especially important after harvesting soybeans, corn for silage, and tobacco. Tillage methods that leave at least about 50 percent crop residue on the surface can

protect most of the sloping soils from unacceptable levels of erosion during winter and early spring.

A conservation tillage system helps to hold soil losses to an acceptable level on most of the sloping soils. If row crops are grown year after year on sloping soils, soil losses generally are high unless a conservation tillage system is applied.

No-till and strip-plant cropping systems are effective in minimizing soil loss on the sloping soils used for corn or soybeans. These conservation tillage systems can be adapted to many of the soils in the county that are susceptible to erosion. When no-till and strip-till are used in areas that have a thick vegetative cover or protective amounts of crop residue, soil moisture evaporates at a slower rate and the weed population is greatly reduced. Bedford, Blocher, Caneyville, Cincinnati, Coolville, Crider, Elkinsville, Grayford, Haggatt, Knobcreek, Markland, Millstone, Nabb, Navilleton, Rarden, Ryker, Scottsburg, Spickert, Trappist, Wellrock, and Wrays soils are examples of sloping soils that are suitable for no-till and strip-till (fig. 10).

Contour farming can be used in several areas of the county (fig. 11). In areas where slopes are short and irregular, however, this practice is difficult to manage. Other types of conservation measures may be more suitable.

Water- and sediment-control basins are effective in reducing the rate of runoff in drainageways. They are most effective where subsurface tile can be installed as an outlet and in areas that have slopes of about 8 percent or less. Bedford, Cincinnati, Crider, Elkinsville, Jennings, Nabb, Navilleton, Medora, Millstone, Pekin, Scottsburg, Shircliff, and Spickert soils are examples of these soils.

Figure 10.—No-till soybeans in wheat stubble and tobacco in an area of Ryker and Grayford soils on a karst landscape.

Figure 11.—Soybeans planted on the contour in an area of Nabb silt loam, 2 to 6 percent slopes, eroded. An area of Cincinnati-Blocher silt loams, 6 to 12 percent slopes, eroded, is in the background.

Grassed waterways are needed to remove surface water runoff from crop fields. Subsurface drains are needed in areas where wetness or seepage is a problem in the waterways.

Grade-stabilization structures are needed in many areas of the county where the outlets of drainageways have unstable overfalls that can be subject to severe gully erosion. These structures stabilize the overfall in the drainageways and minimize gully erosion.

Information about the type and design of erosion-control practices that are best suited to each kind of soil is available at the local office of the Natural Resources Conservation Service.

Wetness is a management concern affecting the cropland and pasture in the county. On most of the naturally wet, poorly drained Bonnie, Cobbsfork, Montgomery, and Peoga soils, production of the crops commonly grown in the county is generally not practical unless a drainage system is installed. In undrained areas of the somewhat poorly drained Avonburg, Bartle, Dubois, Hatfield, McGary, Newark, Stendal, Wakeland, and Whitcomb soils, wetness significantly damages crops in most years.

Various land use regulations of Federal, State, and local governments may impose special restrictions on the use of soils. An example is the protection of wetlands. Statements made in this section about wetness are intended to help the land user identify and reduce the effects of management concerns related to wetness. The landowner or user is responsible for identifying and complying with existing laws and regulations.

The design of both surface and subsurface drainage systems varies with the kind of soil. A combination of surface and subsurface drains is needed on some soils that are

intensively row cropped. Subsurface drains should be more closely spaced in slowly permeable or very slowly permeable soils than in more permeable soils. Filtering material is generally needed in subsurface drains in soils that have minimum grades and a high content of silt. Examples of these soils are Bonnie, Cobbsfork, Newark, Peoga, Stendal, and Wakeland soils. Finding adequate outlets for subsurface drainage systems is difficult in some areas of Bonnie, Cobbsfork, and Peoga soils.

More information about the design of drainage systems for each kind of soil is in the Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Soil structure is an important factor affecting the germination of seeds and the infiltration of water into the soil. Soils that have good soil structure are granular and porous. Many of the soils used for row crops in the county have a surface layer of silt loam that has a moderate to low content of organic matter. In areas where little or no crop residue is left on the surface, a hard crust forms after periods of intensive rainfall. This crust reduces the infiltration rate, increases the runoff rate, and inhibits plant emergence. Regular additions of crop residue, cover crops, manure, and other organic material improve soil structure and help to minimize crusting. Intensive tillage during crop production generally has an adverse effect on the content of organic matter and on overall soil quality.

Many areas of severely eroded Bonnell, Blocher (soft bedrock substratum), Caneyville, Haggatt, Knobcreek, Markland, Rarden, and Trappist soils have a moderately fine textured surface layer. Montgomery soils also have a moderately fine textured surface layer. Cloddiness is a problem in areas of all of these soils. If the soils are tilled when too wet, the surface layer becomes very cloddy when it dries and cannot be easily worked. As a result, preparing a good seedbed is very difficult. Adding organic material to the soil by planting high-residue row crops, planting cover crops, or using a rotation with hay and pasture can improve these conditions. Also, using a system of conservation tillage can help to minimize cloddiness.

Many of the soils in the county have a silty surface layer that is easily compacted. Tilling or grazing when the soils are wet causes surface compaction, which restricts penetration by tillage equipment and plant roots and limits plant growth.

Soil fertility is mainly affected by reaction, by the content of plant nutrients, and by the content of organic matter. Most of the soils on till plains, unglaciated hills, and stream terraces in the county have low natural fertility. They typically are strongly acid or very strongly acid in areas that have not been limed. Most of the soils on flood plains along the Ohio River and Fourteen Mile Creek range from neutral to moderately acid. Soils on flood plains along Silver Creek and Muddy Fork range from neutral to very strongly acid.

On soils that have a pH level below about 6.4, applications of ground limestone are needed to raise the pH level sufficiently for the best utilization of plant nutrients by cultivated crops, such as corn and soybeans, and thus for optimum yields. On these soils, ground limestone is needed for hay and pasture plants, such as alfalfa and red clover. The supply of available phosphorus and potassium is generally below the level needed for good plant growth in most of the soils in the county that have never had applications of fertilizer. On all soils, additions of lime and fertilizer should be based on the results of soil tests, the needs of the crop, and the desired level of yields. The Cooperative Extension Service can help in determining the kinds and amounts of fertilizer and lime to be applied (Adams, 1984; Khasawneh and others, 1980; Munson, 1985; Walsh and Beaton, 1973).

Pasture plants commonly grown in the county are mixtures of tall fescue, orchardgrass, timothy, alfalfa, and red clover. Other pasture plants are bluegrass, ladino clover, redtop, alsike clover, lespedeza, and sweetclover. Most of the soils in the county are well suited to grasses, such as tall fescue, timothy, and orchardgrass, and to legumes, such as red clover, ladino clover, alfalfa, and lespedeza. Legumes grow

poorly in soils that are poorly drained or very poorly drained, such as Bonnie, Cobbsfork, and Peoga soils. The growth of most deep-rooted legumes, such as alfalfa and sweetclover, is significantly restricted in soils that have a fragipan or fragic soil properties, such as Avonburg, Bartle, Bedford, Cincinnati, Dubois, Hatfield, Haubstadt, Jennings, Medora, Nabb, Pekin, Scottsburg, Spickert, and Whitcomb soils.

Poorly drained soils, such as Bonnie, Cobbsfork, Montgomery, and Peoga soils, are well suited to water-tolerant grasses. Well drained soils, such as Crider, Elkinsville, Haggatt, Haymond, Markland, Millstone, Navilleton, Wellrock, and Wrays soils, are well suited to deep-rooted legumes. The latest information on recommended grasses and legumes for each soil type can be obtained from local offices of the Cooperative Extension Service and the Natural Resources Conservation Service.

Field crops suited to the soils and climate in the county include those that are currently grown and some that are not commonly grown. Corn, soybeans, and wheat are the principal cultivated crops. Other cultivated crops grown are oats and rye. Alfalfa, red clover, timothy, bromegrass, and orchardgrass are commonly grown for hay and pasture. A significant acreage is used for tobacco and other specialty crops, such as fruits and vegetables.

The latest information about growing cultivated crops, hay and pasture crops, and specialty crops can be obtained from local offices of the Cooperative Extension Service and the Natural Resources Conservation Service.

Limitations Affecting Cropland and Pasture

The management concerns affecting the use of the detailed soil map units in the survey area for crops and pasture are shown in table 5.

Cropland

The main concerns in managing cropland are controlling erosion; reducing soil wetness and ponding; minimizing surface crusting and cloddiness; operating equipment safely on steep slopes; and limiting the effects of restricted permeability and low available water capacity.

Some of the limitations and hazards shown in the table cannot be easily overcome. These include *flooding, limited rooting depth, restricted permeability, low available water capacity,* and *subsidence.*

Generally, a combination of several practices is needed to control both water erosion and wind erosion. Conservation tillage, stripcropping, contour farming, conservation cropping systems, crop residue management, diversions, grassed waterways, and field windbreaks help to minimize excessive soil loss. Soils that have deep or wide gullies are generally not suitable for use as cropland.

Wetness is a limitation in some areas used for crops, and *ponding* is a hazard. Drainage systems consist of subsurface tile drains, surface inlet tile, open drainage ditches, surface drains, or a combination of these. Measures that maintain the drainage system are needed. Generally, soils that are ponded for long or very long periods during the growing season are not suitable for crops.

Practices that minimize *surface crusting* and *cloddiness* include incorporating green manure crops, manure, or crop residue into the soil and using a system of conservation tillage. Surface cloddiness can be minimized by avoiding tillage when the soil is too wet.

Conserving moisture is needed where the soils have a *low or moderate available water capacity.* It primarily involves reducing the evaporation and runoff rates and increasing the water infiltration rate. Applying conservation tillage and conservation cropping systems, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

A *low pH* or a *high pH* (soil reaction) inhibits the uptake of certain nutrients by the plants or accelerates the absorption of certain other elements to the level of toxic concentrations. Either of these conditions affects the health and vigor of plants. In areas of soils that have a low pH, applications of lime should be based on the results of soil tests. The goal is to achieve the optimum pH level for the uptake of the major nutrients by the specific crop. Generally, the natural reaction in the surface layer of most of the soils in the area is a low pH, except for some soils on flood plains. For most soils in the area, the pH needs to be raised to an optimal level for the crop being grown. Soils with a high pH may need treatment to lower the pH so that certain elements are adequately available for crop growth.

Equipment limitations occur in areas where slopes are 15 percent or more. The operation of farm equipment may be restricted and can become hazardous. Generally, soils with an average slope of 18 percent or more are not suitable for cultivated crops. The use of equipment is limited in areas of some soils because of the slope. Rock fragments on the surface can limit the type of equipment that can be used or can damage equipment during planting operations. Equipment use is also restricted in areas in which 3 percent or more of the surface is covered with stones or boulders or in areas where the soils have a gravelly or cobbly surface layer.

Limited rooting depth and a limited amount of moisture available for plant growth are caused by root-restrictive features within a depth of 40 inches. Root-restrictive features include bedrock, a fragipan, dense till, or stratified sand and gravel.

Crops can be damaged if the soil is subject to occasional or frequent periods of *flooding* during the growing season. Winter-grown small grain crops are especially susceptible to damage. Water-tolerant species should be used in areas that are subject to flooding during the growing season.

Subsidence is the loss or settlement of the organic soil layers through oxidation of the organic soil material. Saturating the organic layers by raising the water table during periods other than the cropping season helps to minimize the oxidation of organic soil layers.

The following is an explanation of the criteria used to determine the limitations or hazards listed in the table.

Cloddiness.—The soil has 35 percent or more clay in the surface layer.

Crusting.—The content of organic matter in the surface layer is less than or equal to 2 percent, the percent passing the number 200 sieve is more than 50 percent, and the content of clay is less than or equal to 32 percent.

Equipment limitation.—The soil has an average slope range that is 15 percent or more; or the soil has stones or boulders that cover 3 percent or more of the surface; or the surface layer contains 15 percent or more rock fragments.

Flooding.—The soil is subject to occasional or frequent periods of flooding during the growing season.

High pH.—Soils that naturally have high pH or high reaction have a typical pH value of 7.4 or more in the surface layer.

Limited rooting depth.—Root-restrictive layers, including bedrock, fragipan, dense till, and stratified sand and gravel, are within a depth of 40 inches.

Low available water capacity.—The weighted average of the available water capacity is less than 0.10 inch of water per inch of soil within a depth of 60 inches.

Low pH.—Soils that naturally have low pH or low reaction have a typical pH value of 6.0 or less in the surface layer.

Moderate available water capacity.—The weighted average of the available water capacity ranges from 0.10 to 0.15 inch of water per inch of soil within a depth of 60 inches.

Ponding.—The soil is subject to occasional or frequent periods of ponding during the growing season.

Restricted permeability.—Permeability is less than 0.2 inch per hour in one or more layers within a depth of 40 inches.

Subsidence.—The soil has an organic layer within a depth of 60 inches.

Water erosion.—The soil erosion factor Kf or Kw multiplied by the slope is more than 0.8, and the average slope is 3 percent or more.

Wetness.—The soil has a water table within a depth of 1.5 feet during the growing season.

Wind erosion.—The wind erodibility group (WEG) assigned to the soil is 1 or 2 (3 for soils that are not on flood plains).

Erosion factors (e.g., Kw factor) and wind erodibility groups are described under the heading “Erosion Properties of the Soils.”

Pasture

Growing legumes, cool-season grasses, and warm-season grasses that are suited to the soils and the climate of the area helps to maintain a productive stand of pasture. The main management concerns affecting pasture are erosion, equipment limitations, wetness and ponding, trafficability, and a low or very low available water capacity.

Some of the limitations and hazards shown in the table cannot be easily overcome. These are *depth to bedrock, low or very low available water capacity, subsidence,* and *flooding.*

Also, the majority of the soils suitable for growing legumes have a high potential for frost action. The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide information about legumes subject to damage from frost heave. This hazard is not listed in table 5 because it applies to the majority of the soils.

Both water erosion and wind erosion reduce the productivity of pastureland. Controlling *erosion* during seedbed preparation is a major concern. If the soil is tilled for the reseeding of pasture or hay crops, planting winter cover crops, establishing grassed waterways, field windbreaks, farming on the contour, and using a system of conservation tillage that leaves a protective cover of crop residue on the surface can help to minimize erosion. Soils that have deep or wide gullies are generally not suitable for pasture.

Wetness is a limitation in some areas used as pasture, and *ponding* is a hazard. Overgrazing or grazing when the soil is wet reduces the extent of plant cover and results in surface compaction and thus increases the susceptibility to erosion. Proper stocking rates, rotation grazing, and timely deferment of grazing, especially during wet periods, help to keep the pasture in good condition. Drainage systems consist of subsurface tile drains, surface inlet tile, open drainage ditches, surface drains, or a combination of these. Measures that maintain the drainage system are needed. Generally, soils that are ponded for long or very long periods during the growing season are not suitable for pasture.

Subsidence is the loss or settlement of the organic soil layers through oxidation of the organic soil material. Saturating the organic layers by raising the water table during periods other than the cropping season helps to minimize the oxidation of organic soil layers.

Trafficability refers to the ability of the soil to support both livestock and machinery. It is a concern in areas of soils that are subject to wetness and have a loamy, clayey, or organic surface layer. The proper location of livestock facilities (watering, feeding, and shelter) helps to minimize surface compaction or the formation of ruts and helps to prevent the damage of pasture crops.

Equipment limitations occur in areas where slopes are 15 percent or more. The operation of farm equipment may be restricted and can become hazardous. The use of equipment is restricted in some areas because of the slope. Generally, soils that have an average slope of 25 percent or more are not suitable for use as pastureland. The

use of equipment is also a concern in areas of soils that have rock fragments on the surface or in the surface layer. The type of equipment that can be used is restricted in these areas, and the equipment may be damaged during reseeding and planting operations.

Limited rooting depth and a limited amount of moisture available for plant growth are caused by root-restrictive features within a depth of 40 inches. Root-restrictive features include bedrock, a fragipan, dense till, or stratified sand and gravel. *Available water capacity* refers to the capacity of soils to hold water available for use by most plants. The quality and quantity of the pasture may be reduced in areas where the soils have a low or very low available water capacity. The soil moisture may be inadequate for the maintenance of a healthy community of desired pasture species and, thus, the desired number of livestock. A poor quality pasture may increase the hazard of erosion and increase the runoff of pollutants. Planting drought-resistant species of grasses and legumes helps to establish a vegetative cover. Irrigation may be needed.

A *low pH* or a *high pH* (soil reaction) inhibits the uptake of certain nutrients by the plants or accelerates the absorption of certain other elements to the level of toxic concentrations. Either of these conditions affects the health and vigor of plants. For a low pH, applications of lime should be based on the results of soil tests. The goal is to achieve the optimum pH level for the uptake of the major nutrients by the specific grass, legume, or combination of grasses and legumes.

The following is an explanation of the criteria used to determine the limitations or hazards listed in the table.

Equipment limitation.—The soil has an average slope range that is 15 percent or more; or the soil has stones or boulders that cover 3 percent or more of the surface; or the surface layer contains 15 percent or more rock fragments.

Flooding.—The soil is subject to occasional or frequent periods of flooding during the growing season.

High pH.—Soils that naturally have high pH or high reaction have a typical pH value of 7.4 or more in the surface layer.

Limited rooting depth.—Root-restrictive layers, including bedrock, fragipan, dense till, and stratified sand and gravel, are within a depth of 40 inches.

Low or very low available water capacity.—The weighted average of the available water capacity is less than 0.10 inch of water per inch of soil within a depth of 60 inches.

Low pH.—Soils that naturally have low pH or low reaction have a typical pH value of 6.0 or less in the surface layer.

Ponding.—The soil is subject to occasional or frequent periods of ponding during the growing season.

Subsidence.—The soil has an organic layer within a depth of 60 inches.

Trafficability.—The soil is somewhat poorly drained, poorly drained, or very poorly drained and has a loamy, clayey, or organic surface layer.

Water erosion.—The soil erosion factor Kf or Kw multiplied by the slope is more than 0.8, and the average slope is 3 percent or more.

Wetness.—The soil is poorly drained or very poorly drained.

Wind erosion.—The wind erodibility group (WEG) assigned to the soil is 1 or 2 (3 for soils that are not on flood plains).

Erosion factors (e.g., Kf factor) and wind erodibility groups are described under the heading “Erosion Properties of the Soils.”

Crop Yield Estimates

The average yields per acre that can be expected for the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table. These differences are the result of variations

in rainfall and other climatic factors; varieties grown; environmental factors, such as plant diseases and insect infestations; and type of fertility program. The land capability classification of each map unit also is shown in the table.

The estimated yields in the table were calculated based on a specific value for corn yields, and the yields for the other crops listed are calculated as a percentage relative to the corn yield.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage; erosion control; protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed and implemented. The relative productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide additional information about the management and productivity of the soils for those crops.

Pasture and Hayland Interpretations

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), or the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated grass-legume hay and pasture yields in table 6 were calculated as a percentage relative to a specific value for corn yields. Yields for hay and pasture crops vary widely based on the type and combination of grass and legume crops grown.

The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide information about forage yields other than those shown in table 6.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for pasture, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961). Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, forestland, or wildlife habitat.

The capability classification of the soils in this survey area is given in the section "Detailed Soil Map Units" and in the yields table.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season

or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses (fig. 12). The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

About 85,312 acres, or 35.4 percent of the survey area, meets the criteria for prime farmland. Areas of this land are throughout the county.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long

Figure 12.—Urban encroachment into areas of prime farmland.

enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2006) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and Vasilas, 2006).

BodAW—Bonnie silt loam, 0 to 1 percent slopes, occasionally flooded, very brief duration
ClfA—Cobbsfork silt loam, 0 to 1 percent slopes
MsvA—Montgomery silty clay loam, 0 to 1 percent slopes
PhaA—Peoga silt loam, 0 to 1 percent slopes

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators; however, areas of hydric soils may be included in some delineations. The components with hydric characteristics and their average percentage of the map unit are included in parentheses. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils. In some cases a minor component may be referred to that was not correlated in Clark County but that has been mapped within one of the major land resource areas (MLRAs) of which Clark County is a part.

AddA—Avonburg silt loam, 0 to 2 percent slopes (Cobbsfork, 10 percent)
AddB—Avonburg silt loam, 2 to 4 percent slopes, eroded (Cobbsfork, 10 percent)
BbhA—Bartle silt loam, 0 to 2 percent slopes (Peoga, 10 percent)
DfnA—Dubois silt loam, 0 to 2 percent slopes (Peoga, 10 percent)
HcaA—Hatfield silt loam, 0 to 2 percent slopes (Ginat, 4 percent)
MhuA—McGary silt loam, 0 to 2 percent slopes (Zipp, 3 percent)

NbhAK—Newark silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration (Wilhite, 5 percent)
StdAQ—Stendal silt loam, 0 to 2 percent slopes, rarely flooded (Bonnie, 5 percent)
StdAW—Stendal silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration (Bonnie, 5 percent; Piopolis, 2 percent)
UedA—Urban land-Aquents, clayey substratum, complex, lake plain, 0 to 3 percent slopes (Montgomery, 6 percent; Zipp, 2 percent)
WaaAV—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration (Birds, 10 percent)
WaaAW—Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration (Birds, 10 percent)
WnmA—Whitcomb silt loam, 0 to 2 percent slopes (very deep, poorly drained, silty soils, 3 percent)

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, yards, fruit trees, gardens, and cropland from wind and snow; help to keep snow on fields; and provide food and cover for wildlife. Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 8 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens.

Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service or from a commercial nursery.

Forestland

Hardwood forest once covered most of the land in Clark County, but many of the trees have been removed from most of the land suitable for cultivation. Much of the remaining forest cover is in steep or very steep areas in the uplands, in level areas in the uplands, or in backswamps on flood plains.

Upland oaks are dominant on the well drained sites. Bonnell, Crider, Elkinsville, Grayford, Haggatt, Hickory, Knobcreek, Millstone, and Ryker soils, for example, are well suited to upland oaks, including white oak, red oak, black oak, chinkapin oak, and associated species. Basswood, beech, black walnut, hickory, sugar maple, and tulip poplar are the dominant associated species. Tulip poplar generally grows on the lower parts of steep slopes, on cool aspects (north- and northeast-facing slopes) and in coves.

Pin oak grows well on poorly drained soils on uplands, terraces, and flood plains. Bonnie, Cobbsfork, and Peoga soils, for example, are well suited to pin oak and associated species. Associated species include soft maple, sweetgum, swamp white oak, and elm.

Sweetgum is a major forest type on the poorly drained Cobbsfork and Peoga soils on uplands and terraces and on the poorly drained Bonnie and somewhat poorly

drained Stendal and Wakeland soils on flood plains. Associated species include soft maple, red river birch, hickory, and sycamore.

Site characteristics that affect tree growth include aspect, or the direction the slope is facing, and position on the slope. These site characteristics influence the amount of available sunlight, air drainage, soil temperature, soil moisture, and relative humidity. North- and east-facing slopes and low positions on the slope are generally the best upland sites for tree growth because they are cooler and have better moisture conditions than south- and west-facing slopes.

Soil properties are fundamentally important for woodland production. Twenty-five percent or more of the mass of a tree is in the soil, which serves as a reservoir for moisture, provides an anchor for roots, and supplies essential plant nutrients. Soil properties that affect the growth of trees include reaction, fertility, wetness, texture, structure, slope, and depth. Trees grow best on soils whose properties are not in the extreme range and that have an effective rooting depth of more than 40 inches.

Soil wetness is the result of a high water table at or above the surface. Soil wetness, flooding, and ponding are properties that greatly influence the species of trees that will grow on a specific site. For example, poorly drained soils or soils that are subject to frequent, long periods of flooding are best suited to species that tolerate wetness, such as pin oak and sweetgum. Well drained soils and soils that are not subject to frequent periods of flooding are best suited to species that cannot tolerate wetness, such as black walnut and white oak.

Wetness causes seedling mortality, limits the use of equipment, and increases the windthrow hazard by restricting the rooting depth of some trees (fig. 13). Ruts form very easily if wheeled skidders are used when the soils are wet. Deep ruts restrict lateral drainage and damage tree roots and soil structure. Also, ruts can form in areas of some soils that do not have a high water table if they are temporarily saturated as a result of heavy rainfall. Flooding is a particular hazard if it occurs frequently or if it lasts more than 7 days. Equipment should be used only during dry periods.

The slope can limit the use of forestry equipment. A slope of 15 percent or more limits the use of some types of equipment in logging and yarding areas and on skid trails and unsurfaced logging roads. The limitation is even more severe in areas that have slopes of more than 25 percent. Erosion is a hazard in areas where the soils are disturbed and the natural ground cover has been removed or diminished. Applying such management practices as water bars or dips can help to control erosion. Also, the design of logging roads and skid trails can help to overcome the steepness and length of slopes and can help to prevent the concentration of water. Operating forestry equipment on the contour where possible helps to control erosion, but in some areas the slope may be a safety concern. On the steeper slopes, logs should be moved uphill to skid trails and yarding areas.

Forestland productivity can be influenced by management activities. These practices include thinning young stands, harvesting mature trees, reducing the potential for fire, and eliminating the use of woodland for grazing. Some of the forestland in the county is used for grazing. Grazing destroys the leaf layer that protects the soil from erosion, can cause soil compaction, and destroys or damages seedlings. Forestland sites that are not used for grazing and where forest management activities are implemented have the highest potential for production.

Much of the existing commercial forestland in Clark County could be improved by thinning out mature trees and undesirable species (timber stand improvement). The Natural Resources Conservation Service, the State Division of Forestry, consulting foresters, or the Cooperative Extension Service can help to determine specific woodland management needs, including assistance in establishing, improving, and preserving forestland.

Figure 13.—Windthrow is a hazard in areas of Avonburg and similar soils that have a high water table or a root-restrictive layer, such as a fragipan.

Forestland Productivity and Management

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

In table 9, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to plant are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

In tables 10a, 10b, 10c, and 10d, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and

that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erosion factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreational Development

In tables 11a and 11b, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and

accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 12, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, rye, oats, sunflowers, and sorghum.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are big bluestem, little bluestem, Indiangrass, sideoats grama, and switchgrass.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are

considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, willow, apple, hawthorn, hazelnut, dogwood, hickory, black walnut, blackberry, elderberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are hawthorn, American plum, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine and eastern redcedar.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, mourning dove, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, and construction materials. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 13a and 13b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost

penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 14a and 14b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit

revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 15a and 15b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 15a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 15b, the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of reclamation material, roadfill, and topsoil are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 16 gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter (fig. 14). “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

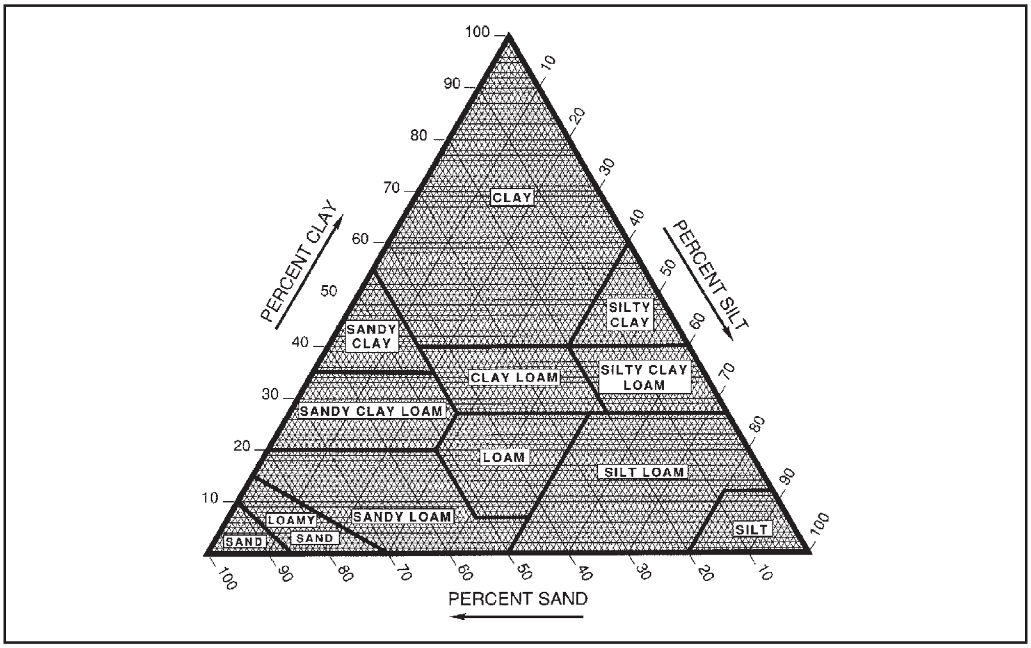

Figure 14.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Properties of the Soils

Table 17 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is

given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^{1}/_{3}$- or $^{1}/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (Ksat) refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (Ksat). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to

buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion Properties of the Soils

Erosion factors are shown in table 18 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook” (USDA/NRCS, National Soil Survey Handbook).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Slope length is the horizontal distance, in feet, from the origin of overland flow to the point where either the slope gradient decreases enough that deposition begins or runoff becomes concentrated in a defined channel (USDA/NRCS, National Soil Survey Handbook).

Slope gradient is the difference in elevation between two points and is expressed as a percentage of the distance between the two points. For example, a difference in elevation of 1 meter over a horizontal distance of 100 meters is a slope of 1 percent.

Chemical Properties of the Soils

Table 19 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality

(pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 20 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish

colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 21 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors

considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Soil slippage potential is the susceptibility of a soil mass to movement downslope when loaded, excavated, or wet. Soil slippage is caused by several natural factors, and the potential is greatly increased by human activity. Type of bedrock and depth to bedrock, slope gradient, position on the landform, clay mineralogy, and the shrink-swell potential are the most important natural factors. Shallow soils that formed in shale, have clay mineralogy, have a high shrink-swell potential, are on steep slopes, and are on footslopes or backslopes are the most susceptible to soil slippage.

Soils that have a medium or high slippage potential are even more susceptible to slippage where certain types of human activity have taken place. Factors that increase the potential for soil slippage include making cuts in hillsides during construction of roadbeds and houses; changing surface runoff patterns and allowing water to concentrate from leaking water and sewer lines; increasing weight on slopes by building structures or placing fill for building sites; changing the course of streams, thereby increasing the flow of water, or removing rock from the streambed, causing the base of slopes to be undercut; and removing vegetation.

Soil slippage causes damage to roads and structures and can endanger human life. Areas that have slipped are susceptible to additional slippage and are generally too unstable for most construction uses.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aqualf (*Aqu*, meaning water, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Fragiaqualfs (*Fragi*, referring to the presence of a fragipan, plus *aqualf*, the suborder of the Alfisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. An example is Aeric Fragiaqualfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, active, mesic Aeric Fragiaqualfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Table 22 indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993) and in the “Field Book for Describing and Sampling Soils” (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2003). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Avonburg Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aeric Fragic Glossaqualfs

Typical Pedon

Avonburg silt loam, on a slope of 1 percent in a cultivated field; 490 feet west and 685 feet south of the center of sec. 21, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 46 minutes 14 seconds N. and long. 85 degrees 45 minutes 02 seconds W., NAD 27 (UTM Zone 16, 608544 easting and 4292062 northing, NAD 83):

Ap—0 to 11 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/3) dry; weak medium granular structure; friable; common very fine roots; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; very strongly acid; abrupt smooth boundary.

BE—11 to 21 inches; brownish yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; few very fine roots; few fine rounded black (10YR 2/1) iron and manganese concretions throughout; many medium prominent light gray (10YR 7/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

Btg—21 to 37 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium prismatic structure parting to moderate coarse subangular blocky; firm; few very fine roots; common distinct gray (10YR 6/1) clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine rounded black (10YR 2/1) iron and manganese concretions throughout; many faint light gray (10YR 7/2) clay depletions on faces of peds; tongues 2 to 6 inches wide filled with light gray (10YR 7/2) silt loam, about 10 percent by volume; very strongly acid; gradual wavy boundary.

2Btgx/Eg—37 to 52 inches; 50 percent light brownish gray (10YR 6/2) silt loam (Btgx); moderate coarse and very coarse prismatic structure parting to moderate coarse subangular blocky; very firm; brittle; common prominent gray (10YR 6/1) clay films on vertical faces of peds; many coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common faint light gray (10YR 7/2) clay depletions on vertical faces of peds; 50 percent light gray (10YR 7/2) silt loam (Eg) occurring as tongues 2 to 6 inches wide at the top and tapering to 1 to 2 inches at the bottom and having a concentration of illuviated grayish brown (10YR 5/2) silty clay loam in the lower part; weak medium and coarse subangular blocky structure; friable; few very fine roots; few fine rounded black (10YR 2/1) iron and manganese concretions throughout; 21 percent sand; 1 percent gravel; extremely acid; gradual wavy boundary.

2Btx—52 to 83 inches; yellowish brown (10YR 5/6) silt loam; moderate very coarse prismatic structure parting to weak coarse subangular blocky; very firm; common prominent gray (10YR 6/1) clay films on faces of peds and in pores; few fine rounded black (10YR 2/1) iron and manganese concretions throughout; common coarse prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 25

percent light gray (10YR 7/2), friable silt loam between peds; 24 percent sand; 1 percent gravel; 75 percent brittle; extremely acid; diffuse wavy boundary.

3Btb—83 to 90 inches; strong brown (7.5YR 5/8) clay loam; moderate coarse subangular blocky structure; firm; many prominent gray (10YR 6/1) clay films on faces of peds; few fine irregular black (10YR 2/1) iron and manganese concretions throughout; many medium prominent light gray (10YR 7/1) iron depletions in the matrix; 4 percent gravel; strongly acid.

Range in Characteristics

Thickness of the loess: 60 to 90 inches
Depth to a layer with fragic soil properties: 20 to 40 inches
Depth to the base of the argillic horizon: More than 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Thickness—2 to 4 inches
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE or EB horizon:
Hue—10YR
Value—5 or 6
Chroma—2 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to slightly acid in limed areas

Bt or Btg horizon:
Hue—10YR
Value—5 or 6
Chroma—1 to 6; where chroma is 3 or more, 50 percent or more of the faces of peds have chroma of 1 or 2
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

2Btgx/Eg or 2Btx/Eg horizon:
Hue—10YR (Btgx or Btx); 10YR (Eg)
Value—5 or 6 (Btgx or Btx); 5 or 6 (Eg)
Chroma—1 to 6 (Btgx or Btx); 1 or 2 (Eg)
Texture—commonly silt loam, less commonly silty clay loam (Btgx or Btx); silt loam (Eg)
Reaction—extremely acid to strongly acid
Content of rock fragments—1 or 2 percent gravel

2Btgx or 2Btx horizon:
Hue—10YR
Value—5 or 6
Chroma—1 to 6
Texture—silt loam

Reaction—extremely acid to strongly acid
Content of rock fragments—1 or 2 percent gravel

3Btb horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 8
Texture—clay loam
Reaction—strongly acid to neutral
Content of rock fragments—2 to 10 percent, mainly gravel; includes cobbles and stones

Bartle Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aeric Fragiaqualfs
Taxadjunct features: The Bartle soils in Clark County do not have a subhorizon with a fragipan that has vertical streaks with a mean horizontal dimension of 4 inches or more. This difference, however, does not alter the usefulness or behavior of the soils. These soils are classified as fine-silty, mixed, active, mesic Aeric Fragic Epiaqualfs.

Typical Pedon

Bartle silt loam, in a nearly level area in a cultivated field; 625 feet north and 800 feet east of the southwest corner of sec. 19, T. 2 S., R. 5 E., Floyd County, Indiana; USGS Crandall, Indiana, topographic quadrangle; lat. 38 degrees 19 minutes 05 seconds N. and long. 86 degrees 00 minutes 33 seconds W., NAD 27 (UTM Zone 16, 586618 easting and 4241575 northing, NAD 83):

Ap—0 to 8 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/3) dry; moderate fine and medium granular structure; friable; common very fine and fine roots; neutral; abrupt smooth boundary.

EB—8 to 14 inches; pale brown (10YR 6/3) silt loam; weak fine subangular blocky structure; friable; few very fine roots; common fine and medium rounded black (10YR 2/1) iron and manganese concretions throughout; common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; abrupt smooth boundary.

BEg—14 to 17 inches; light gray (10YR 7/2) silt loam; weak fine subangular blocky structure; friable; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium rounded black (10YR 2/1) iron and manganese concretions throughout; strongly acid; clear smooth boundary.

Bt—17 to 30 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; friable; many distinct light brownish gray (10YR 6/2) and common distinct brown (10YR 5/3) clay films on faces of peds and in pores; common fine and medium rounded black (10YR 2/1) iron and manganese concretions throughout; many medium faint light brownish gray (10YR 6/2) iron depletions in the matrix; extremely acid; clear wavy boundary.

Btx—30 to 50 inches; brown (10YR 5/3) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; many distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; common medium faint light yellowish brown (10YR 6/4) and common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common fine and medium rounded black (10YR 2/1) iron and manganese concretions throughout; many medium faint light brownish gray (10YR 6/2) iron depletions in the matrix; 45 percent brittle; very strongly acid; clear wavy boundary.

BC1—50 to 66 inches; pale brown (10YR 6/3) silt loam; weak medium and coarse subangular blocky structure; firm; common prominent very dark gray (N 3/) iron and manganese stains in root channels; many medium faint light gray (10YR 7/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

BC2—66 to 80 inches; brownish yellow (10YR 6/8) silt loam; weak coarse subangular blocky structure; firm; common prominent very dark gray (N 3/) iron and manganese stains in root channels; many medium prominent light gray (10YR 7/2) iron depletions in the matrix; 5 percent gravel; very strongly acid.

Range in Characteristics

Thickness of the loess: 0 to 40 inches
Depth to a layer with fragic soil properties: 24 to 40 inches
Depth to the base of the argillic horizon: 48 to 72 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon:
Thickness—2 to 4 inches
Hue—10YR
Value—3 or 4
Chroma—1
Texture—silt loam
Reaction—very strongly acid to neutral

EB, BE, or BEg horizon:
Hue—10YR
Value—5 to 7
Chroma—2 to 6
Texture—silt loam
Reaction—extremely acid to moderately acid

Bt or Btg horizon:
Hue—10YR
Value—5 to 7
Chroma—2 to 6; where chroma is 3 or more, 50 percent or more of the faces of peds have chroma of 1 or 2
Texture—silt loam or silty clay loam
Reaction—extremely acid to moderately acid

Btx or Btgx horizon:
Hue—10YR
Value—5 or 6
Chroma—1 to 6
Texture—silt loam or silty clay loam
Reaction—extremely acid to strongly acid

BC or BCg horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 8
Texture—silt loam, silty clay loam, or loam

Reaction—very strongly acid to neutral
Content of rock fragments—0 to 14 percent gravel

Beanblossom Series

Taxonomic classification: Loamy-skeletal, mixed, active, mesic Fluventic Dystrudepts

Typical Pedon

Beanblossom silt loam, on a slope of 1 percent in an idle field; 460 feet south and 430 feet west of the northeast corner of sec. 22, T. 7 N., R. 2 E., Jackson County, Indiana; USGS Elkinsville, Indiana, topographic quadrangle; lat. 39 degrees 01 minute 59 seconds N. and long. 86 degrees 16 minutes 57 seconds W., NAD 27 (UTM Zone 16, 562105 easting and 4320690 northing, NAD 83):

Ap—0 to 5 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine and medium granular structure; friable; many fine roots; about 10 percent gravel (mixed lithology but mainly siltstone); strongly acid; clear smooth boundary.
Bw—5 to 24 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse subangular blocky structure; friable; common very fine and fine roots; about 5 percent gravel (mixed lithology but mainly siltstone); moderately acid; clear wavy boundary.
2C1—24 to 48 inches; brown (10YR 5/3) extremely channery silt loam; massive; very friable; few fine roots; about 70 percent siltstone channers; moderately acid; clear wavy boundary.
2C2—48 to 54 inches; yellowish brown (10YR 5/4) very channery silt loam; massive; very friable; about 45 percent siltstone channers; moderately acid; abrupt smooth boundary.
3Cr—54 to 60 inches; moderately cemented siltstone bedrock.

Range in Characteristics

Depth to the base of the cambic horizon: 20 to 34 inches
Depth to bedrock (paralithic contact): 40 to 60 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 14 percent gravel and channers

A horizon:
Thickness—less than 6 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 14 percent gravel and channers

Bw or 2Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—commonly silt loam or loam; less commonly the channery, very channery, gravelly, or very gravelly analogs of these textures

Reaction—strongly acid to neutral
Content of rock fragments—5 to 50 percent channers

2C horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—the very channery or extremely channery analogs of silt loam or loam
Reaction—moderately acid or slightly acid
Content of rock fragments—35 to 80 percent channers

3Cr horizon:
Kind of bedrock—weakly or moderately cemented siltstone or shale

Bedford Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Bedford silt loam, on a slope of 4 percent in a cultivated field; 1,180 feet west and 100 feet south of the northeast corner of sec. 15, T. 3 N., R. 2 E., Washington County, Indiana; USGS Campbellsburg, Indiana, topographic quadrangle; lat. 38 degrees 42 minutes 07 seconds N. and long. 86 degrees 16 minutes 34 seconds W., NAD 27 (UTM Zone 16, 562947 easting and 4283956 northing, NAD 83):

Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt1—9 to 14 inches; yellowish brown (10YR 5/4) silt loam; moderate medium subangular blocky structure; friable; many fine roots; many fine pores; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—14 to 20 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; many fine roots; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—20 to 24 inches; yellowish brown (10YR 5/6) silty clay loam; common medium distinct pale brown (10YR 6/3) mottles; moderate medium subangular blocky structure; firm; common fine roots; common fine pores; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; strongly acid; clear smooth boundary.

Btx1—24 to 37 inches; yellowish brown (10YR 5/6) silty clay loam; moderate very coarse prismatic structure; very firm; few fine roots on faces of peds; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; brittle; extremely acid; clear wavy boundary.

2Btx2—37 to 51 inches; yellowish brown (10YR 5/4) silt loam; moderate very coarse prismatic structure; firm; many distinct yellowish brown (10YR 5/6) clay films on faces of peds; many medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 4 percent chert gravel; brittle; extremely acid; clear wavy boundary.

3Btb1—51 to 67 inches; 60 percent yellowish red (5YR 5/6) and 25 percent strong brown (7.5YR 5/6) silty clay; strong coarse angular blocky structure; very firm; many prominent reddish brown (5YR 4/4) clay films on faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 9 percent chert gravel; strongly acid; gradual wavy boundary.

3Btb2—67 to 80 inches; 60 percent yellowish red (5YR 5/6) and 25 percent strong brown (7.5YR 5/6) clay; strong coarse angular blocky structure; very firm; many prominent reddish brown (5YR 4/4) clay films on faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 5 percent chert gravel; strongly acid.

Range in Characteristics

Thickness of the loess: 20 to 40 inches
Depth to a fragipan: 20 to 38 inches
Depth to the base of the argillic horizon: More than 80 inches
Depth to bedrock (lithic contact): 80 to more than 100 inches

Ap or A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in limed areas

E horizon (if it occurs):
Hue—10YR
Value—6
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon and BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid; ranges to moderately acid in the upper part in limed areas

Btx or 2Btx horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—commonly silt loam or silty clay loam; less commonly the gravelly analogs of these textures
Reaction—extremely acid to strongly acid
Content of rock fragments—1 to 30 percent chert gravel and cobbles

3Btb horizon:
Hue—typically multicolored (2.5YR or 5YR); less commonly 7.5YR
Value—3 to 6
Chroma—4 to 6
Texture—silty clay or clay; less commonly the gravelly analogs of these textures
Reaction—extremely acid to strongly acid in the upper part; very strongly acid or strongly acid in the lower part
Content of rock fragments—2 to 30 percent chert gravel and cobbles

Blocher Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Hapludalfs
Taxadjunct features: The Blocher soils in map units BfcC3, CldC3, and JafC3 average

more than 15 percent fine sand and coarser in the upper part of the subsoil. This difference, however, does not alter the usefulness or behavior of the soils. These soils are classified as fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs.

Typical Pedon

Blocher silt loam, on a slope of 9 percent in a hayfield; 390 feet east and 720 feet north of the southwest corner of sec. 3, T. 4 N., R. 7 E., Scott County, Indiana; USGS Deputy, Indiana, topographic quadrangle; lat. 38 degrees 48 minutes 37 seconds N. and long. 85 degrees 44 minutes 19 seconds W., NAD 27 (UTM Zone 16, 609521 easting and 4296485 northing, NAD 83):

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine and medium granular structure; friable; many very fine and fine roots; moderately acid; abrupt smooth boundary.

Bt1—6 to 17 inches; strong brown (7.5YR 5/6) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine and fine roots; many distinct brown (7.5YR 5/4) clay films on faces of peds; common distinct dark yellowish brown (10YR 4/4) organic coatings in root channels; few distinct yellowish brown (10YR 5/4) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

2Bt2—17 to 24 inches; strong brown (7.5YR 5/6) clay loam; strong fine and medium subangular blocky structure; firm; common very fine roots; common prominent dark yellowish brown (10YR 4/4) and very few prominent grayish brown (10YR 5/2) clay films on faces of peds; many distinct pale brown (10YR 6/3) silt coatings on faces of peds; 1 percent gravel; very strongly acid; gradual wavy boundary.

2Bt3—24 to 33 inches; yellowish brown (10YR 5/6) clay loam; strong fine and medium angular blocky structure; very firm; few very fine roots between peds; many distinct strong brown (7.5YR 5/6), common prominent grayish brown (10YR 5/2), and few distinct brown (7.5YR 4/4) clay films on faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 8 percent gravel; very strongly acid; clear wavy boundary.

2Bt4—33 to 44 inches; strong brown (7.5YR 5/6) clay; strong fine and medium angular blocky structure; very firm; few very fine roots between peds; many distinct strong brown (7.5YR 4/6) and few prominent grayish brown (10YR 5/2) clay films on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 10 percent gravel; strongly acid; gradual wavy boundary.

2Bt5—44 to 53 inches; yellowish brown (10YR 5/6) clay loam; moderate fine and medium subangular blocky structure; very firm; many distinct dark yellowish brown (10YR 4/4) and few distinct grayish brown (10YR 5/2) clay films on faces of peds; common medium prominent black irregular masses of manganese lining pores; 3 percent gravel; slightly acid; gradual wavy boundary.

2Bt6—53 to 62 inches; yellowish brown (10YR 5/6) clay loam; moderate fine and medium subangular blocky structure; firm; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium prominent black irregular masses of manganese lining pores; 3 percent gravel; neutral; gradual wavy boundary.

2BCt—62 to 76 inches; yellowish brown (10YR 5/6) clay loam; weak fine and medium subangular blocky structure; firm; very few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few medium prominent black irregular masses of manganese lining pores; 3 percent gravel; neutral; gradual wavy boundary.

2C—76 to 80 inches; yellowish brown (10YR 5/4) loam (65 percent) with pockets of clay loam (35 percent); common coarse distinct strong brown (7.5YR 5/6) mottles; massive; friable; common medium and coarse prominent black irregular masses of manganese lining pores; 3 percent gravel; slightly alkaline.

Range in Characteristics

Thickness of the loess and loamy material: 16 to 36 inches
Depth to the base of the argillic horizon: 50 to 80 inches
Depth to bedrock (paralithic contact): 60 to 80 inches in the soft bedrock substratum phase
Depth to bedrock (lithic contact): 60 to 80 inches in the hard bedrock substratum phase

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Thickness—2 to 5 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam; ranges to loam in the lower part
Reaction—very strongly acid or strongly acid; ranges to slightly acid in the upper part in limed areas

2Bt horizon:
Hue—10YR or 7.5YR
Value—5
Chroma—4 to 8
Texture—clay loam or clay; silty clay included in the bedrock substratum phases
Reaction—very strongly acid or strongly acid in the upper part; ranges to neutral in the lower part
Content of rock fragments—3 to 10 percent gravel and cobbles

2BCt horizon:
Hue—10YR or 7.5YR
Value—5
Chroma—4 to 8
Texture—clay loam or clay
Reaction—moderately acid to slightly alkaline
Content of rock fragments—3 to 10 percent gravel and cobbles

2C horizon:
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—loam or clay loam
Reaction—slightly alkaline or moderately alkaline
Content of rock fragments—3 to 10 percent gravel and cobbles

Bonnell Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Bonnell silt loam, on an east-facing, convex slope of 25 percent in a forested area; 700 feet north and 2,000 feet east of the southwest corner of sec. 14, T. 4 N., R. 3 W., Ohio County, Indiana; USGS Bear Branch, Indiana, topographic quadrangle; lat. 38 degrees 55 minutes 08 seconds N. and long. 85 degrees 04 minutes 22 seconds W., NAD 27 (UTM Zone 16, 667083 easting and 4309547 northing, NAD 83):

A—0 to 3 inches; very dark gray (10YR 3/1) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many coarse roots; very strongly acid; clear smooth boundary.

EB—3 to 6 inches; dark grayish brown (10YR 4/2) silt loam; moderate medium granular structure; friable; many fine and coarse roots; very strongly acid; clear wavy boundary.

Bt1—6 to 9 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; common fine and medium roots; few faint yellowish brown (10YR 5/4) clay films on faces of peds; strongly acid; clear wavy boundary.

2Bt2—9 to 26 inches; brown (7.5YR 4/4) clay; moderate medium angular blocky structure; firm; common fine and medium roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

2Bt3—26 to 36 inches; dark yellowish brown (10YR 4/4) clay; moderate medium subangular and angular blocky structure; firm; common fine and medium roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese concretions throughout; 4 percent gravel; very strongly acid; clear wavy boundary.

2Bt4—36 to 44 inches; yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine and medium roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese concretions throughout; 3 percent gravel; very strongly acid; clear wavy boundary.

2Bt5—44 to 60 inches; dark yellowish brown (10YR 4/4) clay loam; weak coarse subangular blocky structure; firm; few fine and medium roots; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine black (10YR 2/1) iron and manganese concretions throughout; 3 percent gravel; strongly acid in the upper part and slightly acid in the lower part; gradual wavy boundary.

2BCt—60 to 70 inches; brown (10YR 5/3) clay loam; weak coarse subangular blocky structure; firm; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine black (10YR 2/1) iron and manganese concretions throughout; 5 percent gravel; strongly effervescent; slightly alkaline; gradual wavy boundary.

2C—70 to 80 inches; brown (10YR 5/3) clay loam; massive; firm; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or loamy materials: Less than 18 inches
Depth to the base of the argillic horizon: 40 to 65 inches

A horizon:
Thickness—2 to 5 inches
Hue—10YR
Value—2 to 4
Chroma—1 or 2

Texture—silt loam
Reaction—very strongly acid or strongly acid

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 6
Texture—silt loam or clay loam
Reaction—very strongly acid to neutral

EB or BE horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—10YR
Value—5
Chroma—4 to 6
Texture—loam, silt loam, or silty clay loam
Reaction—very strongly acid or strongly acid

2Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 8
Texture—clay loam or clay
Reaction—very strongly acid or strongly acid in the upper part and moderately acid to slightly alkaline in the lower part
Content of rock fragments—3 to 5 percent gravel and cobbles

2BCt horizon:
Hue—10YR
Value—5
Chroma—3 to 6
Texture—clay loam or loam
Reaction—commonly slightly alkaline or neutral; less commonly slightly acid
Content of rock fragments—3 to 8 percent gravel and cobbles

2C horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—loam or clay loam
Reaction—slightly alkaline or moderately alkaline
Content of rock fragments—3 to 8 percent gravel

Bonnie Series

Taxonomic classification: Fine-silty, mixed, active, acid, mesic Typic Fluvaquents

Typical Pedon

Bonnie silt loam, in a nearly level area in a cultivated field; 1,160 feet west and 1,385 feet north of the center of sec. 9, T. 4 N., R. 7 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 48 minutes 18 seconds

N. and long. 85 degrees 51 minutes 01 second W., NAD 27 (UTM Zone 16, 599832 easting and 4295771 northing, NAD 83):

Ap—0 to 9 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate medium granular structure; friable; common very fine roots; few fine rounded iron and manganese concretions throughout; common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; slightly acid; abrupt smooth boundary.

Cg1—9 to 20 inches; light brownish gray (10YR 6/2) silt loam; weak thick platy structure; friable; few very fine roots; common medium faint pale brown (10YR 6/3) masses of iron accumulation in the matrix; common prominent yellowish red (5YR 4/6) iron stains lining pores and root channels; few fine rounded iron and manganese concretions throughout; common fine irregular iron nodules; slightly acid; gradual wavy boundary.

Cg2—20 to 31 inches; light gray (10YR 7/2) silt loam; massive; friable; few very fine roots; common medium prominent yellowish brown (10YR 5/6) and few faint pale brown (10YR 6/3) masses of iron accumulation in the matrix; few prominent yellowish red (5YR 4/6) iron stains lining pores and root channels; few fine rounded iron and manganese concretions throughout; few fine irregular iron nodules; strongly acid; gradual wavy boundary.

Cg3—31 to 47 inches; gray (10YR 6/1) silt loam; massive; friable; few medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common prominent yellowish red (5YR 4/6) iron stains lining pores and root channels; few medium irregular iron and manganese concretions throughout; common fine irregular iron nodules; strongly acid; gradual wavy boundary.

Cg4—47 to 60 inches; light gray (10YR 7/1) silt loam; massive; friable; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common prominent yellowish red (5YR 5/8) iron stains lining pores; common fine irregular iron nodules throughout; strongly acid.

Range in Characteristics

Ap or A horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam
Reaction—very strongly acid to neutral

Cg horizon:
Hue—10YR, 2.5Y, or N
Value—5 to 7
Chroma—0 to 2
Texture—silt loam; silty clay loam included below a depth of 40 inches
Reaction—commonly very strongly acid or strongly acid; ranges to slightly acid in the lower part and in the upper part in limed areas

Brownstown Series

Taxonomic classification: Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Brownstown silt loam (fig. 15), on a southeast-facing, convex slope of 48 percent in a forested area; 500 feet west and 1,550 feet south of the northeast corner of sec. 28, T. 2 N., R. 6 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 35 minutes 04 seconds N. and long. 85 degrees 51

Figure 15.—A profile of a Brownstown soil. Depth is marked in feet.

minutes 58 seconds W., NAD 27 (UTM Zone 16, 598760 easting and 4271279 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves from mixed deciduous trees.

E/A—1 to 6 inches; silt loam, 90 percent light yellowish brown (10YR 6/4) (E) and 10 percent dark grayish brown (10YR 4/2) (A), very pale brown (10YR 8/4) and light brownish gray (10YR 6/2) dry; weak medium granular structure; friable; many very fine to medium roots; 5 percent channers; very strongly acid; clear wavy boundary.

Bw—6 to 18 inches; brownish yellow (10YR 6/6) channery silt loam; weak medium subangular blocky structure; friable; few very fine and fine and common medium and coarse roots; 20 percent channers; very strongly acid; gradual wavy boundary.
CB—18 to 36 inches; yellowish brown (10YR 5/4) extremely channery silt loam; weak fine subangular blocky structure; friable; few very fine to medium roots; 65 percent channers and 5 percent flagstones; very strongly acid; gradual wavy boundary.
R—36 to 60 inches; fractured, strongly cemented siltstone bedrock.

Range in Characteristics

Depth to the base of the cambic horizon: 12 to 24 inches
Depth to bedrock (lithic contact): 20 to 40 inches

E/A or A horizon (if it occurs):
Hue—10YR
Value—3 or 4 (A); 5 or 6 (E)
Chroma—2 or 3 (A); 4 to 6 (E)
Texture—silt loam or channery silt loam
Reaction—extremely acid to slightly acid
Content of rock fragments—0 to 34 percent channers and flagstones

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—the channery to extremely channery analogs of silt loam
Reaction—extremely acid to strongly acid
Content of rock fragments—20 to 75 percent channers and flagstones

CB horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—extremely channery silt loam
Reaction—extremely acid to strongly acid
Content of rock fragments—60 to 85 percent channers and flagstones

Caneyville Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Caneyville silt loam, on a slope of 15 percent in pasture; 300 feet south and 100 feet west of the northeast corner of sec. 20, T. 6 N., R. 1 W., Lawrence County, Indiana; USGS Bartlettsville, Indiana, topographic quadrangle; lat. 38 degrees 56 minutes 28 seconds N. and long. 86 degrees 25 minutes 32 seconds W., NAD 27 (UTM Zone 16, 549768 easting and 4310425 northing, NAD 83):

Ap—0 to 8 inches; 90 percent brown (10YR 4/3) and 10 percent dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; moderate medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.
Bt1—8 to 14 inches; dark yellowish brown (10YR 4/4) silt loam; common medium faint yellowish brown (10YR 5/4) mottles; moderate medium subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; neutral; clear wavy boundary.

2Bt2—14 to 33 inches yellowish red (5YR 4/6) silty clay; strong coarse angular blocky structure; firm; many distinct yellowish red (5YR 4/8) clay films on faces of peds; 1-inch layer of dark yellowish brown (10YR 4/4) clay at a depth of 32 inches; strongly acid in the upper part and neutral at a depth of 32 inches; abrupt smooth boundary.

2R—33 to 60 inches; indurated limestone bedrock.

Range in Characteristics

Thickness of the solum and depth to bedrock (lithic contact): 20 to 40 inches
Thickness of the silty material: 0 to 18 inches

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 5 percent chert gravel

A horizon (if it occurs):
Thickness—1 to 5 inches
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 or 3
Texture—silt loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 5 percent chert gravel

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 5 percent chert gravel

2Bt horizon:
Hue—5YR or 7.5YR; less commonly 2.5YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay or clay
Reaction—strongly acid to neutral; ranges to slightly alkaline in the lower part
Content of rock fragments—0 to 14 percent chert gravel

Cincinnati Series

Taxonomic classification: Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs

Typical Pedon

Cincinnati silt loam, on a slope of 7 percent in a hayfield; 550 feet south and 320 feet east of the northwest corner of sec. 13, T. 2 N., R. 8 E., Scott County, Indiana; USGS New Washington, Indiana, topographic quadrangle; lat. 38 degrees 37 minutes 03 seconds N. and long. 85 degrees 34 minutes 49 seconds W., NAD 27 (UTM Zone 16, 623600 easting and 4275493 northing, NAD 83):

Ap—0 to 8 inches; 85 percent brown (10YR 4/3) and 15 percent yellowish brown (10YR 5/6) silt loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; many very fine and fine roots; moderately acid; abrupt smooth boundary.

Bt—8 to 24 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; common very fine and fine roots; many distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; strongly acid; clear wavy boundary.

2Btx1—24 to 36 inches; yellowish brown (10YR 5/6) silt loam; moderate very coarse prismatic structure; firm; few very fine roots between peds; many distinct grayish brown (10YR 5/2) and common distinct strong brown (7.5YR 5/6) clay films on vertical faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 1 percent gravel; brittle; very strongly acid; gradual wavy boundary.

2Btx2—36 to 51 inches; brownish yellow (10YR 6/6) loam; moderate very coarse prismatic structure; very firm; common prominent grayish brown (10YR 5/2) clay films on vertical faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 2 percent gravel; brittle; strongly acid; gradual wavy boundary.

2Btx3—51 to 74 inches; yellowish brown (10YR 5/6) loam; weak coarse prismatic structure; firm; common distinct grayish brown (10YR 5/2) clay films on vertical faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 5 percent gravel; brittle; very strongly acid; diffuse wavy boundary.

3Bt—74 to 80 inches; strong brown (7.5YR 5/8) clay loam; weak coarse subangular blocky structure; firm; common prominent gray (10YR 6/1) clay films on faces of peds; 3 percent gravel; strongly acid.

Range in Characteristics

Thickness of the loess or silty material: 18 to 40 inches
Depth to a fragipan: 20 to 36 inches; 10 to 20 inches in severely eroded areas

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

Bt horizon (formed in loess):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

2Btx horizon (formed in pedisediments):
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam or loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 5 percent gravel

3Bt horizon (formed in till):
Hue—7.5YR or 10YR

Value—5 or 6
Chroma—4 to 8
Texture—clay loam and loam
Reaction—very strongly acid to slightly acid
Content of rock fragments—3 to 10 percent gravel

Cobbsfork Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fragic Glossaqualfs

Typical Pedon

Cobbsfork silt loam, in a nearly level area in a cultivated field; 150 feet west and 1,300 feet north of the southeast corner of sec. 2, T. 5 N., R. 10 E., Jefferson County, Indiana; USGS Rexville, Indiana, topographic quadrangle; lat. 38 degrees 54 minutes 06 seconds N. and long. 85 degrees 22 minutes 13 seconds W., NAD 27 (UTM Zone 16, 641322 easting and 4307133 northing, NAD 83):

Ap1—0 to 6 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak fine granular structure; friable; many fine roots; many fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation lining tubular pores; common fine faint gray (10YR 6/1) iron depletions in the matrix; neutral; abrupt smooth boundary.

Ap2—6 to 12 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak very thick platy structure; friable; few fine roots; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation lining tubular pores; common fine faint gray (10YR 6/1) iron depletions in the matrix; slightly acid; abrupt smooth boundary.

EBg—12 to 18 inches; light gray (10YR 7/1) silt loam; weak medium subangular blocky structure; friable; few fine roots; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation lining tubular pores; few fine rounded very dark brown (10YR 2/2), strongly cemented iron and manganese concretions throughout; strongly acid; gradual wavy boundary.

Btg—18 to 27 inches; light brownish gray (10YR 6/2) silt loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots between peds; common distinct grayish brown (10YR 5/2) clay films on faces of peds (dominantly vertical); common fine prominent strong brown (7.5YR 5/8) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation lining tubular pores; few fine rounded very dark brown (10YR 2/2), strongly cemented iron and manganese concretions throughout; many faint gray (10YR 6/1) clay depletions on faces of peds; very strongly acid; gradual wavy boundary.

Btg/Eg—27 to 38 inches; 60 percent light brownish gray (10YR 6/2) silt loam (Btg); moderate medium and coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds; common distinct gray (10YR 6/1) clay films on vertical faces of peds; common fine prominent strong brown (7.5YR 5/8) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation lining tubular pores; 40 percent light gray (10YR 7/2) silt loam (Eg); weak medium subangular blocky structure; friable; few fine roots throughout; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation lining tubular pores; few fine

rounded very dark brown (10YR 2/2), strongly cemented iron and manganese concretions throughout; krotovinas; very strongly acid; gradual wavy boundary.

2Eg/Btgx—38 to 50 inches; 60 percent light gray (10YR 7/2) silt loam (Eg); weak fine subangular blocky structure; friable; common fine roots throughout; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few medium rounded black (10YR 2/1), strongly cemented iron and manganese concretions; 40 percent light brownish gray (10YR 6/2) silt loam (Btgx); moderate coarse prismatic structure parting to moderate medium angular blocky; firm; brittle; few fine roots between peds; common prominent gray (10YR 6/1) clay films on vertical faces of peds; common fine distinct yellowish brown (10YR 5/4) and prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine prominent yellowish red (5YR 4/6) masses of iron accumulation lining tubular pores; common prominent black (10YR 2/1) iron and manganese stains lining pores; few fine rounded very dark brown (10YR 2/2), strongly cemented iron and manganese concretions throughout; krotovinas; 1 percent gravel; very strongly acid; gradual wavy boundary.

2Btx—50 to 85 inches; yellowish brown (10YR 5/4) silt loam; weak medium and coarse prismatic structure parting to weak medium subangular blocky; firm; common faint gray (10YR 6/1) clay films on vertical faces of peds; few fine faint light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common medium rounded black (10YR 2/1), strongly cemented iron and manganese concretions; many faint gray (10YR 6/1) clay depletions on vertical faces of peds; 2 percent gravel; 70 percent brittle; very strongly acid; diffuse wavy boundary.

3Btb—85 to 90 inches; strong brown (7.5YR 5/8) clay loam; weak coarse subangular blocky structure; firm; few prominent light brownish gray (2.5Y 6/2) clay films on faces of peds; common medium rounded very dark gray (10YR 3/1), strongly cemented iron and manganese concretions; common fine and medium prominent gray (10YR 6/1) iron depletions in the matrix; 4 percent gravel; slightly acid.

Range in Characteristics

Thickness of the loess: 75 to 96 inches
Depth to the top of the glossic horizon: 24 to 36 inches
Depth to a layer with fragic soil properties: 36 to 45 inches
Depth to the base of the argillic horizon: More than 80 inches

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—3 to 5
Chroma—1 or 2 (where value is 3, thickness is 1 to 4 inches)
Texture—silt loam
Reaction—very strongly acid or strongly acid

EBg or BEg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to slightly acid in limed areas

Btg horizon:
Hue—10YR
Value—6 or 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

Btg/Eg horizon:
Hue—10YR (Btg); 10YR or 2.5Y (Eg)
Value—5 to 7 (Btg); 6 or 7 (Eg)
Chroma—1 or 2
Texture—silt loam or silty clay loam (Btg); silt loam (Eg)
Reaction—extremely acid or very strongly acid

2Eg/Btgx horizon:
Hue—10YR or 2.5Y (Eg); 7.5YR or 10YR (Btgx)
Value—6 or 7 (Eg); 4 to 6 (Btgx)
Chroma—1 or 2
Texture—silt loam (Eg); silt loam or silty clay loam (Btgx)
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 or 2 percent gravel

2Btx or 2Btgx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 to 6
Texture—silt loam
Reaction—extremely acid to strongly acid
Content of rock fragments—1 or 2 percent gravel

3Btb or 3Btgb horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—1 to 8
Texture—clay loam
Reaction—commonly strongly acid or moderately acid in the upper part; ranges to neutral in the lower part
Content of rock fragments—2 to 10 percent gravel

Coolville Series

Taxonomic classification: Fine, mixed, active, mesic Aquultic Hapludalfs

Typical Pedon

Coolville silt loam (fig. 16), on a slope of 8 percent in a forested area; 1,900 feet west and 820 feet north of the southeast corner of sec. 15, T. 2 N., R. 6 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 36 minutes 24 seconds N. and long. 85 degrees 50 minutes 15 seconds W., NAD 27 (UTM Zone 16, 601221 easting and 4273776 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves; abrupt wavy boundary.
A—1 to 2 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; weak fine granular structure; very friable; common very fine and fine and common medium and coarse roots; extremely acid; abrupt wavy boundary.

Figure 16.—A profile of a Coolville soil. Depth is marked in feet.

E—2 to 8 inches; yellowish brown (10YR 5/4) silt loam; weak very fine subangular blocky structure; friable; common very fine and fine and common medium and coarse roots; extremely acid; clear wavy boundary.

BE—8 to 12 inches; yellowish brown (10YR 5/6) silt loam; weak fine and medium subangular blocky structure; friable; common very fine and fine and common medium and coarse roots between peds; extremely acid; clear wavy boundary.

Bt1—12 to 21 inches; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; few fine and common medium and coarse

roots between peds; many distinct strong brown (7.5YR 5/6) clay films on faces of peds; very strongly acid; clear wavy boundary.

2Bt2—21 to 30 inches; red (2.5YR 4/8) silty clay; many medium prominent pale yellow (2.5Y 7/4) mottles; moderate fine and medium angular blocky structure; firm; few fine and few medium and coarse roots between peds; many distinct red (2.5YR 4/8) and pale yellow (2.5Y 7/4) clay films on faces of peds; few fine prominent light gray (10YR 7/2) clay depletions in the matrix; very strongly acid; clear wavy boundary.

2Bt3—30 to 37 inches; light brownish gray (2.5Y 6/2) silty clay; moderate coarse prismatic structure parting to moderate coarse angular blocky; firm; few very fine and fine roots between peds; many distinct light brownish gray (2.5Y 6/2) clay films on faces of peds; many medium prominent red (2.5YR 4/8) masses of iron accumulation in the matrix; very strongly acid; clear wavy boundary.

2BC—37 to 44 inches; brown (7.5YR 5/4) parachannery silty clay loam; weak thick platy structure parting to weak fine angular blocky; firm; few very fine roots between peds; many coarse prominent light olive gray (5Y 6/2) clay depletions in the matrix; 30 percent parachanners; very strongly acid; gradual wavy boundary.

2Cr—44 to 60 inches; light olive brown (2.5Y 5/4), fractured, moderately cemented siltstone bedrock; very firm; common fine and medium barite crystals between shale fragments; common medium prominent reddish brown (5YR 4/4) masses of iron accumulation between shale fragments; very strongly acid.

Range in Characteristics

Thickness of the loess or silty material: 14 to 26 inches
Depth to bedrock (paralithic contact): 40 to 60 inches

A horizon:
Thickness—1 to 4 inches
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—extremely acid or strongly acid

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—extremely acid to neutral

E horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—silt loam
Reaction—extremely acid to strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—6 to 8
Texture—silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—0 to 3 percent gravel (ironstone)

2Bt horizon:
Hue—2.5YR to 10YR; ranges to 2.5Y in the lower part
Value—4 to 6
Chroma—4 to 8; ranges to 2 in the lower part
Texture—silty clay or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—0 to 10 percent gravel and cobbles (ironstone)
Content of pararock fragments—0 to 14 percent parachanners

2BC or 2CB horizon:
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—4 to 8
Texture—the parachannery to extremely parachannery analogs of silty clay loam or silty clay
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 10 percent gravel and cobbles (ironstone)
Content of pararock fragments—15 to 70 percent

Crider Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Crider silt loam, on a slope of 5 percent in a pasture; 900 feet east and 2,300 feet north of the southwest corner of sec. 5, T. 2 S., R. 5 E., Floyd County, Indiana; USGS Georgetown, Indiana, topographic quadrangle; lat. 38 degrees 22 minutes 01 second N. and long. 85 degrees 59 minutes 20 seconds W., NAD 27 (UTM Zone 16, 588312 easting and 4247035 northing, NAD 83):

Ap—0 to 8 inches; 90 percent dark yellowish brown (10YR 4/4) and 10 percent yellowish brown (10YR 5/6) silt loam, light yellowish brown (10YR 6/4) and very pale brown (10YR 7/4) dry; weak fine and medium subangular blocky structure parting to moderate fine granular; friable; neutral; abrupt smooth boundary.

Bt1—8 to 17 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; many prominent brown (7.5YR 4/4) clay films on faces of peds; few distinct dark brown (10YR 3/3) organic coatings on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds and in pores; 1 percent chert gravel; neutral; clear wavy boundary.

Bt2—17 to 24 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; many prominent brown (7.5YR 4/4) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds and in pores; 1 percent chert gravel; slightly acid; clear wavy boundary.

2Bt3—24 to 34 inches; strong brown (7.5YR 4/6) silt loam; moderate fine subangular blocky structure; friable; common prominent yellowish red (5YR 4/6) clay films on faces of peds and in pores; common prominent yellowish brown (10YR 5/4) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; 4 percent angular limestone flagstones and 10 percent angular chert gravel; strongly acid; clear wavy boundary.

2Bt4—34 to 46 inches; yellowish red (5YR 5/6) silty clay loam; moderate fine subangular blocky structure; firm; common prominent red (2.5YR 4/6) and common prominent yellowish brown (10YR 5/4) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; 4

percent angular chert gravel and 1 percent angular limestone flagstones; very strongly acid; clear wavy boundary.

3Bt5—46 to 56 inches; red (2.5YR 4/6) silty clay; moderate very fine angular blocky structure; firm; common prominent brown (7.5YR 4/4) and many prominent red (2.5YR 4/6) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; 2 percent angular chert gravel; very strongly acid; clear wavy boundary.

3Bt6—56 to 65 inches; red (2.5YR 4/6) clay; moderate very fine angular blocky structure; firm; common prominent brown (7.5YR 4/4) and many prominent red (2.5YR 4/6) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; 2 percent angular chert gravel; very strongly acid; clear wavy boundary.

3Bt7—65 to 76 inches; 70 percent yellowish red (5YR 5/6) and 30 percent strong brown (7.5YR 5/6) silty clay; moderate very fine and fine angular blocky structure; firm; many prominent red (2.5YR 4/8) and few prominent strong brown (7.5YR 4/6) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; few fine irregular black (10YR 2/1) iron and manganese concretions throughout; 3 percent chert gravel; strongly acid; clear wavy boundary.

3Bt8—76 to 80 inches; strong brown (7.5YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; many prominent yellowish red (5YR 4/6) and few prominent strong brown (7.5YR 4/6) clay films on faces of peds; common prominent black (10YR 2/1) iron and manganese stains on faces of peds; common fine irregular black (10YR 2/1) iron and manganese concretions throughout; 3 percent chert gravel; strongly acid.

Range in Characteristics

Thickness of the loess: 20 to 45 inches
Depth to the base of the argillic horizon: 60 to more than 80 inches
Depth to bedrock (lithic contact): 60 to more than 100 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay loam or silt loam
Reaction—commonly very strongly acid or strongly acid; ranges to neutral in the upper part
Content of rock fragments—0 to 2 percent chert gravel

2Bt horizon:
Hue—2.5YR to 7.5YR
Value—3 to 5

Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 14 percent chert gravel

3Bt horizon:
Hue—2.5YR to 7.5YR
Value—3 to 6
Chroma—4 to 8
Texture—silty clay or clay
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 14 percent chert gravel, flagstones, and stones

Cuba Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fluventic Dystrudepts

Typical Pedon

Cuba silt loam, in a nearly level area in a cultivated field; 210 feet east and 1,710 feet north of the center of sec. 28, T. 1 N., R. 3 W., Dubois County, Indiana; USGS Cuzco, Indiana, topographic quadrangle; lat. 38 degrees 29 minutes 40 seconds N. and long. 86 degrees 44 minutes 44 seconds W., NAD 27 (UTM Zone 16, 522188 easting and 4260713 northing, NAD 83):

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

Bw1—10 to 21 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine roots; few distinct brown (10YR 4/3) organic coatings on faces of peds; very strongly acid; gradual wavy boundary.

Bw2—21 to 47 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure parting to moderate medium granular; friable; very strongly acid; clear wavy boundary.

C—47 to 60 inches; brown (10YR 5/3) silt loam; common medium distinct light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) mottles; massive; friable; few fine distinct black (10YR 2/1) iron and manganese concretions; very strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 54 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 3 percent gravel

A horizon (if it occurs):
Thickness—1 to 2 inches
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam

Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 3 percent gravel

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 3 percent gravel

C horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam or loam; sandy loam, fine sandy loam, and thin strata of loamy sand included below a depth of 40 inches
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 14 percent gravel

Deam Series

Taxonomic classification: Fine, illitic, mesic Ultic Hapludalfs

Typical Pedon

Deam silty clay loam (fig. 17), on a slope of 40 percent in a hardwood forest; 1,780 feet west and 450 feet south of the center of sec. 11, T. 2 N., R. 6 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 37 minutes 31 seconds N. and long. 85 degrees 49 minutes 41 seconds W., NAD 27 (UTM Zone 16, 602017 easting and 4275852 northing, NAD 83):

A—0 to 3 inches; 75 percent light olive brown (2.5Y 5/3) and 25 percent very dark grayish brown (10YR 3/2) silty clay loam, pale yellow (2.5Y 7/3) and grayish brown (2.5Y 5/2) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; many very fine and fine and common medium and coarse roots; extremely acid; clear smooth boundary.

Bt1—3 to 11 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; common very fine and fine roots and common medium and coarse roots between peds; many distinct light olive brown (2.5Y 5/4) clay films on faces of peds; extremely acid; clear wavy boundary.

Bt2—11 to 24 inches; light olive brown (2.5Y 5/4) silty clay; moderate fine angular blocky structure; firm; few very fine and fine and few medium and coarse roots between peds; many distinct light olive brown (2.5Y 5/4) and very few prominent light olive gray (5Y 6/2) clay films on faces of peds; 5 percent parachanners; very strongly acid; clear wavy boundary.

BC—24 to 30 inches; olive (5Y 4/3) parachannery silty clay; weak medium platy and moderate fine angular blocky structure; firm; few very fine to medium roots between peds; common distinct olive gray (5Y 5/2) iron-depleted coatings on faces of peds; 30 percent parachanners; very strongly acid; clear wavy boundary.

CB—30 to 36 inches; olive (5Y 4/3) extremely parachannery silty clay; moderate thick platy structure; firm; few very fine and fine roots between peds; common distinct olive gray (5Y 5/2) iron-depleted coatings on rock fragments; 80 percent parachanners; very strongly acid; clear wavy boundary.

Figure 17.—A profile of a Deam soil. Depth is marked in feet.

Cr—36 to 60 inches; olive (5Y 4/3), weathered shale bedrock, 1/4 to 3/4 inch in thickness and 2 to 10 inches in width; very firm; common distinct olive gray (5Y 5/2) iron-depleted coatings on shale fragments; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 18 to 30 inches
Depth to bedrock (paralithic contact): 20 to 40 inches
Kind of pararock fragments: Weakly or moderately cemented shale
Content of clay in the particle-size control section: Averages 38 to 45 percent

A horizon:
Hue—10YR or 2.5Y
Value—3 to 6

Chroma—2 to 4 (where value and chroma are 2 or 3, the A horizon is less than 4 inches thick)
Texture—silty clay loam
Reaction—extremely acid to slightly acid
Content of pararock fragments—0 to 10 percent parachanners

Bt horizon:
Hue—2.5Y or 5Y
Value—5 or 6
Chroma—3 or 4
Texture—silty clay loam or silty clay
Reaction—extremely acid or very strongly acid
Content of pararock fragments—0 to 14 percent parachanners
Content of rock fragments—0 to 10 percent gravel and cobbles (ironstone)

BC or CB horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—3 or 4
Texture—the parachannery to extremely parachannery analogs of silty clay or silty clay loam
Reaction—very strongly acid or strongly acid
Content of pararock fragments—30 to 80 percent parachanners
Content of rock fragments—0 to 10 percent gravel and cobbles (ironstone)

Cr horizon:
Hue—5Y
Value—4 or 5
Chroma—3 or 4
Reaction—very strongly acid to slightly acid

Dearborn Series

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Fluventic Hapludolls

Typical Pedon

Dearborn loam, in a nearly level area in a cultivated field; 400 feet west and 900 feet north of the southeast corner of sec. 7, T. 7 N., R. 1 W., Dearborn County, Indiana; USGS Cedar Grove, Indiana, topographic quadrangle: lat. 39 degrees 16 minutes 46 seconds N. and long. 84 degrees 54 minutes 50 seconds W., NAD 27 (UTM Zone 16, 679939 easting and 4349868 northing, NAD 83):

A1—0 to 4 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent limestone channers; violently effervescent; slightly alkaline; clear smooth boundary.

A2—4 to 10 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; friable; common fine roots; 5 percent limestone channers; violently effervescent; slightly alkaline; clear smooth boundary.

Bw—10 to 16 inches; brown (10YR 4/3) clay loam; weak coarse subangular blocky structure; firm; common fine roots; few distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds and lining root channels; 8 percent limestone channers; violently effervescent; slightly alkaline; abrupt smooth boundary.

2C1—16 to 48 inches; brown (10YR 4/3) extremely channery coarse sandy loam; massive; very friable; common fine roots; 70 percent limestone channers and flagstones; violently effervescent; slightly alkaline; gradual wavy boundary.
2C2—48 to 60 inches; brown (10YR 4/3) extremely channery sandy clay loam; massive; firm; few fine roots; 60 percent limestone channers and flagstones; violently effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 16 inches
Thickness of the solum: 10 to 30 inches
Kind of rock fragments: Dominantly very strongly cemented or indurated limestone channers and flagstones; gravel included in the range
Reaction: Slightly alkaline or moderately alkaline throughout the series control section

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—2 or 3
Texture—loam or silt loam
Content of rock fragments—3 to 14 percent channers and flagstones

Bw horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 or 4
Texture—loam, clay loam, or sandy loam or the flaggy or channery analogs of these textures
Content of rock fragments—5 to 34 percent channers and flagstones

2C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—the very flaggy, very channery, extremely flaggy, or extremely channery analogs of coarse sandy loam, sandy loam, loam, or sandy clay loam
Content of rock fragments—35 to 80 percent channers and flagstones in individual layers; averages more than 50 percent

Deputy Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Hapludults

Typical Pedon

Deputy silt loam, on a slope of 3 percent in a pasture; 1,200 feet west and 2,300 feet south of the northeast corner of sec. 17, T. 4 N., R. 8 E., Jefferson County, Indiana; USGS Deputy, Indiana, topographic quadrangle; lat. 38 degrees 47 minutes 22 seconds N. and long. 85 degrees 39 minutes 05 seconds W., NAD 27 (UTM Zone 16, 617128 easting and 4294281 northing, NAD 83):

Ap—0 to 8 inches; 90 percent brown (10YR 4/3) and 10 percent yellowish brown (10YR 5/6) silt loam, light brownish gray (10YR 6/2) and very pale brown (10YR 7/4) dry; moderate medium granular structure; friable; common fine roots; slightly acid; abrupt wavy boundary.
Bt1—8 to 15 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—15 to 20 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots; few faint brown (7.5YR 5/4) clay films on faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

Bt3—20 to 27 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; few fine distinct brown (7.5YR 4/4) masses of iron accumulation in the matrix; few prominent very dark gray (10YR 3/1) iron and manganese stains on surfaces along pores; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

2Bt4—27 to 42 inches; yellowish brown (10YR 5/6) silty clay; moderate medium and coarse angular blocky structure; very firm; few fine roots; common prominent gray (10YR 5/1) clay films on faces of peds; few fine distinct brown (7.5YR 4/4) masses of iron accumulation in the matrix; few prominent very dark gray (10YR 3/1) iron and manganese stains on surfaces along pores; many medium prominent gray (10YR 6/1) iron depletions in the matrix; very strongly acid; clear wavy boundary.

2Btg—42 to 53 inches; light gray (10YR 7/1) silty clay; weak coarse angular blocky structure; very firm; few faint gray (10YR 5/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 6 percent shale parachanners (1/8 inch to 3 inches); very strongly acid; gradual wavy boundary.

2Cr—53 to 77 inches; 80 percent light gray (2.5Y 7/1) and light olive brown (2.5Y 5/6) and 20 percent strong brown (7.5YR 5/8) and very dark gray (2.5Y 3/1), fractured, weakly cemented shale fragments; very strongly acid; abrupt wavy boundary.

2R—77 to 81 inches; fractured, very strongly cemented black shale.

Range in Characteristics

Thickness of the loess: 20 to 36 inches
Depth to the base of the argillic horizon: 38 to 58 inches
Depth to bedrock (paralithic contact): 40 to 60 inches
Depth to bedrock (lithic contact): 60 to 80 inches
Content of clay in the particle-size control section: Averages between 27 and 34 percent
Content of sand in the particle-size control section: Averages between 2 and 10 percent

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam

Reaction—commonly very strongly acid or strongly acid; ranges to slightly acid in the upper part in limed areas

2Bt or 2Btg horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—1 to 6
Texture—commonly silty clay; less commonly clay
Reaction—extremely acid or very strongly acid
Content of pararock fragments—0 to 10 percent shale parachanners

2BC or 2BCg horizon (if it occurs):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—1 to 6
Texture—silty clay loam or silty clay
Reaction—extremely acid or very strongly acid
Content of pararock fragments—15 to 50 percent shale parachanners
Content of rock fragments—0 to 10 percent gravel (pyrite)

2Cr horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 7
Chroma—1 to 6
Reaction—extremely acid or very strongly acid

Dubois Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aeric Fragiaqualfs

Typical Pedon

Dubois silt loam, on a slope of 1 percent in a cultivated field; 725 feet east and 1,450 feet south of the northwest corner of sec. 35, T. 4 N., R. 6 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 44 minutes 46 seconds N. and long. 85 degrees 49 minutes 46 seconds W., NAD 27 (UTM Zone 16, 601725 easting and 4289259 northing, NAD 83):

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak very coarse subangular blocky structure parting to moderate medium granular; friable; common very fine and fine roots; common fine and medium rounded iron and manganese concretions; neutral; clear smooth boundary.

BE—10 to 17 inches; brownish yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; few very fine roots between peds; few distinct strong brown (7.5YR 4/6) iron stains on faces of peds; common fine faint yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine and medium rounded iron and manganese concretions; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

Bt1—17 to 23 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium prismatic structure parting to moderate coarse angular blocky; firm; few very fine roots between peds; common distinct grayish brown (10YR 5/2) clay films on faces of peds; few prominent strong brown (7.5YR 5/6) iron stains on faces of peds; many distinct light gray (10YR 7/2) clay depletions on faces of peds; many medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; extremely acid; clear wavy boundary.

Bt2—23 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate coarse angular blocky; firm; few very fine roots between peds; many prominent gray (10YR 6/1) clay films on faces of peds; many distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; many fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; extremely acid; gradual wavy boundary.

2Btx1—38 to 62 inches; dark yellowish brown (10YR 4/6) silt loam; moderate very coarse prismatic structure; very firm; common prominent gray (10YR 6/1), brown (10YR 5/3), and reddish brown (5YR 4/4) clay films on vertical faces of peds; many faint strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; brittle; very strongly acid; gradual wavy boundary.

2Btx2—62 to 82 inches; brownish yellow (10YR 6/6) silty clay loam; weak coarse and very coarse prismatic structure; firm; common prominent gray (10YR 5/1) and brown (10YR 4/3) clay films on vertical faces of peds; few prominent reddish brown (5YR 4/4) iron stains on vertical faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; brittle; strongly acid; diffuse wavy boundary.

2Bt—82 to 96 inches; strong brown (7.5YR 5/6) silty clay loam; moderate coarse angular blocky structure; very firm; many prominent light brownish gray (10YR 6/2) clay films on faces of peds; common medium faint brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common medium prominent light gray (10YR 7/2) iron depletions in the matrix; neutral.

Range in Characteristics

Thickness of the loess: 24 to 40 inches
Depth to a fragipan: 22 to 40 inches
Depth to the base of the argillic horizon: 80 inches or more

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE or EB horizon:
Hue—10YR
Value—5 or 6
Chroma—2 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to slightly acid in limed areas

Bt or Btg horizon:
Hue—10YR or 2.5Y
Value—5 or 6

Chroma—1 to 4; where chroma is 3 or 4, 50 percent or more of the ped faces have chroma of 2 or less
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

Btx or 2Btx horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam; less commonly loam
Reaction—very strongly acid or strongly acid; less commonly extremely acid

2Bt or 2Btg horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—1 to 8
Texture—commonly silt loam, silty clay loam, loam, or clay loam; less commonly sandy clay loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 2 percent gravel

2BC or 2BCg horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam, clay loam, loam, silt loam, sandy clay loam, or fine sandy loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 2 percent gravel

Eden Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Eden flaggy silty clay, on a slope of 47 percent in a forested area; 700 feet east and 1,500 feet south of the northwest corner of sec. 31, T. 5 N., R. 11 E., Jefferson County, Indiana; USGS Canaan, Indiana, topographic quadrangle; lat. 38 degrees 50 minutes 08 seconds N. and long. 85 degrees 20 minutes 53 seconds W., NAD 27 (UTM Zone 16, 643384 easting and 4299830 northing, NAD 83):

A—0 to 6 inches; brown (10YR 4/3) flaggy silty clay, light brownish gray (10YR 6/2) dry; weak medium granular and subangular blocky structure; friable; common fine roots; 5 percent channers and 17 percent flagstones (limestone); slightly acid; clear smooth boundary.
Bt1—6 to 11 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common fine and few coarse roots; common distinct brown (10YR 4/3) clay films on faces of peds; 5 percent channers and 5 percent flagstones (limestone); neutral; clear wavy boundary.
Bt2—11 to 20 inches; light olive brown (2.5Y 5/4) flaggy silty clay; strong medium subangular blocky structure; very firm; common fine roots; many distinct light yellowish brown (2.5Y 6/4) clay films on faces of peds; 5 percent channers and 10

percent flagstones (limestone); slightly effervescent; slightly alkaline; clear wavy boundary.

Bt3—20 to 39 inches; light olive brown (2.5Y 5/4) flaggy silty clay; weak medium and coarse subangular blocky structure; very firm; few medium roots; common distinct light yellowish brown (2.5Y 6/4) clay films on faces of peds; 10 percent channers and 20 percent flagstones (limestone); strongly effervescent; moderately alkaline; clear irregular boundary.

Cr—39 to 60 inches; calcareous, weakly cemented shale interbedded with fractured, indurated layers of limestone.

Range in Characteristics

Thickness of the solum: 14 to 40 inches
Depth to bedrock (paralithic contact): 20 to 40 inches
Kind of rock fragments: Dominantly very strongly cemented or indurated limestone channers and flagstones

A horizon:
Thickness—1 to 6 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silty clay, silty clay loam, flaggy silty clay, or flaggy silty clay loam
Reaction—moderately acid to neutral
Content of rock fragments—0 to 20 percent flagstones and channers

Ap horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silty clay, silty clay loam, flaggy silty clay, or flaggy silty clay loam
Reaction—moderately acid to neutral
Content of rock fragments—0 to 20 percent flagstones and channers

BA horizon (if it occurs):
Hue—commonly 10YR or 2.5Y; less commonly 5Y
Value—4 or 5
Chroma—4 to 6
Texture—silty clay, clay, flaggy silty clay, or flaggy clay
Reaction—neutral
Content of rock fragments—5 to 35 percent flagstones and channers

Bt horizon:
Hue—commonly 10YR or 2.5Y; less commonly 5Y
Value—4 or 5
Chroma—4 to 6
Texture—silty clay, clay, flaggy silty clay, or flaggy clay
Reaction—neutral or slightly alkaline; ranges to moderately alkaline in the lower part
Content of rock fragments—10 to 35 percent flagstones and channers

Cr horizon:
Hue—2.5Y or 5Y
Value—5 or 6
Chroma—3 or 4
Reaction—slightly alkaline or moderately alkaline

Elkinsville Series

Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Elkinsville silt loam, on a slope of 3 percent in a cultivated field; 1,690 feet south and 1,370 feet east of the northwest corner of sec. 3, T. 6 N., R. 12 E., Ripley County, Indiana; USGS Cross Plains, Indiana, topographic quadrangle; lat. 38 degrees 59 minutes 46 seconds N. and long. 85 degrees 10 minutes 48 seconds W., NAD 27 (UTM Zone 16, 657615 easting and 4317926 northing, NAD 83):

Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak very fine granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

Bt1—9 to 15 inches; yellowish brown (10YR 5/6) silt loam; moderate fine subangular blocky structure; friable; few fine roots; few faint yellowish brown (10YR 5/4) clay films on faces of peds; few distinct brown (10YR 4/3) organic coatings on faces of peds; slightly acid; gradual smooth boundary.

Bt2—15 to 24 inches; yellowish brown (10YR 5/6) silt loam; moderate fine subangular blocky structure; firm; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; very strongly acid; gradual smooth boundary.

2Bt3—24 to 38 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; few fine roots; many distinct brown (7.5YR 5/4) clay films on faces of peds; 1 percent gravel; very strongly acid; gradual smooth boundary.

2Bt4—38 to 50 inches; strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; firm; few fine roots; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; very strongly acid; 1 percent gravel; gradual smooth boundary.

2Bt5—50 to 58 inches; strong brown (7.5YR 5/6) sandy clay loam; few fine prominent pale brown (10YR 6/3) mottles; weak fine subangular blocky structure; friable; few distinct yellowish brown (10YR 5/4) clay bridges between sand grains; common irregular fine and medium masses of iron accumulation in the matrix; very strongly acid; gradual smooth boundary.

2CB—58 to 68 inches; yellowish brown (10YR 5/6) clay loam; common fine distinct pale brown (10YR 6/3) mottles; massive; friable; common irregular fine and medium masses of iron accumulation in the matrix; 1 percent gravel; strongly acid; clear smooth boundary.

2C—68 to 80 inches; dark yellowish brown (10YR 4/4) loam; massive; friable; 4 percent gravel; moderately acid.

Range in Characteristics

Thickness of the loess: Less than 40 inches
Depth to the base of the argillic horizon: 42 to 72 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4

Texture—silt loam
Reaction—very strongly acid or strongly acid

EB or BE horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—loam, clay loam, or sandy clay loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 5 percent gravel

2BC or 2CB horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—loam, sandy loam, fine sandy loam, clay loam, or sandy clay loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 5 percent gravel

2C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—loam, sandy loam, or fine sandy loam; includes thin strata of clay loam or sandy clay loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 14 percent gravel

Gilwood Series

Taxonomic classification: Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Gilwood silt loam, on a convex slope of 22 percent in a forested area; 600 feet south and 130 feet east of the center of sec. 26, T. 7 N., R. 2 E., Jackson County, Indiana; USGS Elkinsville, Indiana, topographic quadrangle; lat. 39 degrees 00 minutes 38 seconds N. and long. 86 degrees 16 minutes 16 seconds W., NAD 27 (UTM Zone 16, 563101 easting and 4318232 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves from mixed deciduous trees.

A—1 to 6 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak medium granular structure; friable; many fine and medium roots; 10 percent channers; slightly acid; clear wavy boundary.

BE—6 to 11 inches; yellowish brown (10YR 5/4) channery silt loam; weak fine subangular blocky structure; friable; many medium roots; 15 percent channers; strongly acid; clear wavy boundary.

Bt—11 to 22 inches; yellowish brown (10YR 5/6) channery silt loam; moderate fine and medium subangular blocky structure; friable; common fine and medium roots; many distinct strong brown (7.5YR 5/6) clay films on faces of peds; 20 percent channers; very strongly acid; gradual wavy boundary.

CB—22 to 32 inches; light yellowish brown (2.5Y 6/4) extremely channery silt loam; weak fine subangular blocky structure; friable; 65 percent channers; very strongly acid; clear wavy boundary.

R—32 to 60 inches; fractured, very strongly cemented siltstone bedrock.

Range in Characteristics

Depth to the base of the argillic horizon: 15 to 32 inches
Depth to bedrock (lithic contact): 20 to 40 inches

A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam or channery silt loam
Reaction—very strongly acid to slightly acid
Content of rock fragments—0 to 30 percent channers

E horizon (if it occurs):
Hue—10YR
Value—6
Chroma—4 to 6
Texture—silt loam or channery silt loam
Reaction—very strongly acid to slightly acid
Content of rock fragments—0 to 30 percent channers

BE horizon:
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam or channery silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—5 to 30 percent channers

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—channery silt loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—15 to 30 percent channers

CB or BC horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—4 to 6
Texture—very channery silt loam or extremely channery silt loam

Reaction—extremely acid or very strongly acid
Content of rock fragments—35 to 65 percent channers

Gnawbone Series

Taxonomic classification: Fine-silty, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Gnawbone silt loam, on a west-facing, convex slope of 22 percent in a forested area; 600 feet south and 450 feet west of the northeast corner of sec. 28, T. 2 N., R. 6 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 35 minutes 13 seconds N. and long. 85 degrees 51 minutes 01 second W., NAD 27 (UTM Zone 16, 600136 easting and 4271573 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves from mixed deciduous trees.

A—1 to 7 inches; light yellowish brown (10YR 6/4) silt loam, very pale brown (10YR 7/4) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; many very fine to medium and few coarse roots; 3 percent gravel (ironstone); extremely acid; clear wavy boundary.

Bt1—7 to 12 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; friable; many medium, common fine and very fine, and few coarse roots between peds; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; 3 percent gravel (ironstone); 10 percent parachanners; extremely acid; clear wavy boundary.

Bt2—12 to 17 inches; dark yellowish brown (10YR 4/6) parachannery silty clay loam; moderate medium subangular blocky structure; friable; common very fine to medium and few coarse roots between peds; common distinct strong brown (7.5YR 5/6) clay films on faces of peds; 10 percent gravel (ironstone); 15 percent parachanners; very strongly acid; clear wavy boundary.

Bt3—17 to 27 inches; dark yellowish brown (10YR 4/6) parachannery silty clay loam; moderate medium subangular blocky structure; friable; common fine and medium and few coarse roots between peds; many distinct strong brown (7.5YR 5/6) clay films on faces of peds; 3 percent gravel (ironstone); 20 percent parachanners; very strongly acid; clear wavy boundary.

Bt4—27 to 35 inches; yellowish brown (10YR 5/4) very parachannery silt loam; moderate fine subangular blocky structure; friable; common fine and medium roots between peds; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; 3 percent gravel (ironstone); 35 percent parachanners; very strongly acid; gradual wavy boundary.

CB—35 to 39 inches; yellowish brown (10YR 5/4) extremely parachannery silt loam; weak fine subangular blocky structure; friable; 3 percent gravel (ironstone); 60 percent parachanners; very strongly acid; gradual wavy boundary.

Cr—39 to 60 inches; light olive brown (2.5Y 5/4), fractured, moderately cemented siltstone bedrock.

Range in Characteristics

Depth to the base of the argillic horizon: 18 to 36 inches
Depth to bedrock (paralithic contact): 20 to 40 inches

A or Ap horizon (if it occurs):
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—silt loam

Reaction—extremely acid or very strongly acid; ranges to neutral in limed areas
Content of rock fragments—1 to 5 percent gravel (ironstone)

Bt or BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam or the parachannery or very parachannery analogs of these textures
Reaction—extremely acid or very strongly acid
Content of pararock fragments—0 to 35 percent parachanners
Content of rock fragments—1 to 12 percent gravel and cobbles (ironstone)

CB or BC horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—4 to 8
Texture—the parachannery to extremely parachannery analogs of silt loam or silty clay loam
Reaction—extremely acid or very strongly acid
Content of pararock fragments—30 to 70 percent parachanners
Content of rock fragments—1 to 12 percent gravel and cobbles (ironstone)

Cr horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6

Grayford Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Grayford silt loam (fig. 18), on a slope of 13 percent in a pasture; 1,816 feet east and 1,130 feet north of the southwest corner of sec. 29, T. 4 N., R. 9 E., Jefferson County, Indiana; USGS Volga, Indiana, topographic quadrangle; lat. 38 degrees 45 minutes 18 seconds N. and long. 85 degrees 32 minutes 52 seconds W., NAD 27 (UTM Zone 16, 626189 easting and 4290592 northing, NAD 83):

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.
Bt1—6 to 12 inches; strong brown (7.5YR 5/6) silt loam; weak medium subangular blocky structure; friable; common fine roots; few faint strong brown (7.5YR 5/6) clay films on faces of peds; moderately acid; gradual smooth boundary.
Bt2—12 to 22 inches; strong brown (7.5YR 5/6) silt loam; moderate medium subangular blocky structure; friable; few fine roots; many prominent reddish brown (5YR 4/4) clay films on faces of peds; few fine very dark gray (10YR 3/1) iron and manganese concretions in the matrix; very strongly acid; gradual wavy boundary.
2Bt3—22 to 33 inches; yellowish red (5YR 5/6) loam; moderate medium angular and subangular blocky structure; firm; many distinct reddish brown (5YR 4/4) clay films on faces of peds and lining pores; many medium very dark gray (10YR 3/1) iron and manganese concretions in the matrix; 3 percent gravel; very strongly acid; gradual wavy boundary.
2Bt4—33 to 45 inches; yellowish red (5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; many distinct reddish brown (5YR 4/4) clay films

Figure 18.—A profile of a Grayford soil. Depth is marked in feet.

on faces of peds and lining pores; many medium very dark gray (10YR 3/1) iron and manganese concretions in the matrix; 3 percent gravel; strongly acid; gradual wavy boundary.

3Bt5—45 to 52 inches; reddish brown (5YR 4/4) clay; weak very coarse subangular blocky structure; very firm; many distinct reddish brown (5YR 4/4) clay films on faces of peds; many medium very dark gray (10YR 3/1) iron and manganese concretions in the matrix; 3 percent subangular chert gravel; 10 percent subangular chert cobbles; strongly acid; abrupt wavy boundary.

3R—52 to 60 inches; indurated limestone bedrock.

Range in Characteristics

Thickness of the loess: 0 to 22 inches
Depth to clayey residuum: 35 to 55 inches

Depth to bedrock (lithic contact): 40 to 60 inches
Depth to the base of the argillic horizon: 40 to 60 inches

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 10 percent gravel

A horizon (if it occurs):
Thickness—1 to 4 inches
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 5 percent gravel

E horizon (if it occurs):
Hue—10YR
Value—6
Chroma—4 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 5 percent gravel

Bt or BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas
Content of rock fragments—0 to 5 percent gravel

2Bt horizon:
Hue—5YR, 7.5YR, or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—commonly loam or clay loam; less commonly silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—1 to 10 percent gravel

3Bt horizon:
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay, clay, gravelly clay, or gravelly silty clay; less commonly cobbly clay
Reaction—strongly acid or moderately acid
Content of rock fragments—2 to 34 percent chert gravel and cobbles

3BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—3 or 4

Texture—silty clay, clay, gravelly clay, or gravelly silty clay; less commonly cobbly clay
Reaction—strongly acid to neutral
Content of rock fragments—2 to 34 percent chert gravel and cobbles

Haggatt Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Haggatt silt loam, on a slope of 16 percent in a pasture; 400 feet north and 1,500 feet east of the southwest corner of sec. 11, T. 1 S., R. 4 E., Washington County, Indiana; USGS Palmyra, Indiana, topographic quadrangle; lat. 38 degrees 26 minutes 03 seconds N. and long. 86 degrees 02 minutes 44 seconds W., NAD 27 (UTM Zone 16, 583304 easting and 4254426 northing, NAD 83):

Ap—0 to 5 inches; 90 percent brown (10YR 4/3) and 10 percent strong brown (7.5YR 5/6) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; very strongly acid; abrupt smooth boundary.
Bt1—5 to 16 inches; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; many fine roots; many fine pores; many distinct brown (7.5YR 4/4) clay films on faces of peds; 12 percent gravel; very strongly acid; clear wavy boundary.
2Bt2—16 to 25 inches; red (2.5YR 4/6) clay; moderate medium angular blocky structure; firm; common fine roots; common fine pores; many distinct reddish brown (2.5YR 4/4) clay films on faces of peds; 3 percent gravel; very strongly acid; clear wavy boundary.
2Bt3—25 to 36 inches; red (2.5YR 4/6) clay; moderate medium angular blocky structure; very firm; few fine roots; few fine pores; many distinct reddish brown (2.5YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.
2Bt4—36 to 44 inches; strong brown (7.5YR 4/6) clay; strong coarse angular blocky structure; very firm; many distinct brown (7.5YR 4/4) clay films on faces of peds; common medium very dark gray (10YR 3/1) iron and manganese concretions; neutral; clear wavy boundary.
2R—44 to 60 inches; light gray (10YR 7/1), fractured, indurated limestone bedrock.

Range in Characteristics

Thickness of the loess: 0 to 20 inches
Depth to bedrock (lithic contact): 40 to 60 inches
Depth to the base of the argillic horizon: 40 to 60 inches

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 10 percent chert gravel

A horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam

Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 10 percent chert gravel

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas
Content of rock fragments—0 to 14 percent chert gravel and cobbles

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR; in some part has hue of 5YR or redder
Value—4 or 5
Chroma—4 to 8
Texture—silty clay or clay; less commonly the gravelly analogs of these textures
Reaction—very strongly acid or strongly acid; ranges to neutral in the lower part
Content of rock fragments—0 to 20 percent chert gravel, cobbles, and stones

Hatfield Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aeric Fragic Epiaqualfs

Typical Pedon

Hatfield silt loam, on a slope of 1 percent in a pasture; 800 feet north and 800 feet east of the southwest corner of sec. 20, T. 6 S., R. 3 W., Perry County, Indiana; USGS Tell City, Indiana, topographic quadrangle; lat. 37 degrees 58 minutes 23 seconds N. and long. 86 degrees 46 minutes 10 seconds W., NAD 27 (UTM Zone 16, 520249 easting and 4202856 northing, NAD 83):

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine subangular blocky structure parting to moderate fine granular; friable; many fine and medium roots; 3 percent rounded quartzite and subrounded sandstone fine gravel; neutral; abrupt smooth boundary.

Bt—7 to 14 inches; light yellowish brown (10YR 6/4) silt loam; moderate fine subangular blocky structure; friable; many distinct light gray (10YR 7/1) clay films on faces of peds and in pores; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; many fine irregular black (10YR 2/1) iron and manganese concretions; common medium distinct light gray (10YR 7/2) iron depletions in the matrix; 5 percent rounded quartzite and subrounded sandstone fine gravel; moderately acid; clear smooth boundary.

Btg1—14 to 20 inches; light gray (10YR 7/2) silt loam; moderate fine subangular blocky structure; friable; many faint light gray (10YR 7/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine irregular black (10YR 2/1) iron and manganese concretions; common medium faint light gray (10YR 7/2) iron depletions in the matrix; 3 percent rounded quartzite fine gravel; very strongly acid; gradual smooth boundary.

Btg2—20 to 27 inches; light gray (10YR 7/2) silty clay loam; weak fine prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many faint light gray (10YR 7/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine irregular black (10YR 2/1) iron and manganese concretions; 3

percent rounded quartzite fine gravel; very strongly acid; gradual smooth boundary.

Btg3—27 to 36 inches; 85 percent light brownish gray (10YR 6/2) and 15 percent dark yellowish brown (10YR 4/6) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many faint light gray (10YR 7/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine irregular black (10YR 2/1) iron and manganese concretions; 1 percent rounded quartzite gravel; very strongly acid; gradual wavy boundary.

Btg/Btx—36 to 44 inches; 60 percent light brownish gray (10YR 6/2) silty clay loam (Btg); moderate medium subangular blocky structure; firm; many faint light gray (10YR 7/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; many fine irregular black (10YR 2/1) iron and manganese concretions; 40 percent dark yellowish brown (10YR 4/6) silty clay loam (Btx); weak medium prismatic structure parting to moderate medium subangular blocky; very firm; few distinct light gray (10YR 7/1) clay films on vertical faces of peds; brittle; strongly acid; gradual wavy boundary.

Btx1—44 to 55 inches; dark yellowish brown (10YR 4/6) silty clay loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; few distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; many fine irregular black (10YR 2/1) iron and manganese concretions; common medium prominent light brownish gray (10YR 6/2) clay depletions in the matrix; 65 percent brittle; strongly acid; gradual smooth boundary.

Btx2—55 to 78 inches; dark yellowish brown (10YR 4/6) silty clay loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; few distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; many fine irregular black (10YR 2/1) iron and manganese concretions; common medium prominent light brownish gray (10YR 6/2) clay depletions in the matrix; 65 percent brittle; moderately acid; gradual smooth boundary.

BCt—78 to 83 inches; dark yellowish brown (10YR 4/4) silt loam; moderate very thick platy structure parting to moderate fine subangular blocky; firm; very few distinct yellowish brown (10YR 5/4) clay films on faces of peds; common irregular black (10YR 2/1) iron and manganese concretions; neutral.

Range in Characteristics

Depth to a layer with fragic soil properties: 30 to 45 inches
Depth to the base of the argillic horizon: 60 to more than 80 inches

Ap or A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to moderately acid; ranges to neutral in limed areas
Content of rock fragments—0 to 5 percent gravel

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam
Reaction—commonly very strongly acid to moderately acid; ranges to slightly acid in the upper part in limed areas
Content of rock fragments—0 to 5 percent gravel

Btg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 5 percent gravel

Btg/Btx or Btx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam; less commonly loam
Reaction—very strongly acid or strongly acid in the upper part; ranges to slightly acid in the lower part
Content of rock fragments—0 to 5 percent gravel

BC or BCt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 6
Texture—silt loam, silty clay loam, loam, or clay loam or stratified with these textures
Reaction—strongly acid to slightly alkaline
Content of rock fragments—0 to 5 percent gravel

Haubstadt Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Fragiudalfs

Typical Pedon

Haubstadt silt loam, on a convex slope of 4 percent in a cultivated field; 1,930 feet east and 500 feet south of the center of sec. 18, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 47 minutes 07 seconds N. and long. 85 degrees 46 minutes 45 seconds W., NAD 27 (UTM Zone 16, 606036 easting and 4293662 northing, NAD 83):

Ap—0 to 7 inches; 80 percent dark yellowish brown (10YR 4/4) and 20 percent yellowish brown (10YR 5/6) silt loam, light yellowish brown (10YR 6/4) and very pale brown (10YR 7/4) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; common very fine and fine roots; few fine rounded black (10YR 2/1) iron and manganese concretions; slightly acid; abrupt smooth boundary.

BE—7 to 14 inches; yellowish brown (10YR 5/6) silt loam; weak fine subangular blocky structure; friable; few very fine and fine roots; many faint light yellowish brown (10YR 6/4) silt coatings on faces of peds; common distinct dark yellowish brown (10YR 4/4) organic coatings filling tubular pores; common fine rounded black (10YR 2/1) iron and manganese concretions; very strongly acid; clear wavy boundary.

Bt1—14 to 20 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; common distinct dark yellowish brown (10YR 4/4) and few distinct brown (10YR 5/3) clay films on faces of peds; many distinct pale brown (10YR 6/3) silt coatings on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; few fine

prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

Bt2—20 to 32 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium prismatic structure parting to moderate coarse subangular blocky; firm; few very fine roots; many distinct dark yellowish brown (10YR 4/4) and common distinct grayish brown (10YR 5/2) clay films on faces of peds; many distinct pale brown (10YR 6/3) silt coatings on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; gradual irregular boundary.

Btx1—32 to 54 inches; brownish yellow (10YR 6/6) silt loam; moderate very coarse prismatic structure parting to moderate coarse subangular blocky; very firm; few very fine roots; many prominent grayish brown (10YR 5/2) and common distinct brown (10YR 4/3) clay films on vertical faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; many prominent light gray (10YR 7/2) clay depletions on faces of peds; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; brittle; very strongly acid; gradual wavy boundary.

Btx2—54 to 61 inches; brownish yellow (10YR 6/6) silty clay loam; weak very coarse prismatic structure; very firm; many prominent grayish brown (10YR 5/2) and common distinct brown (10YR 4/3) clay films on vertical faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; brittle; very strongly acid; gradual wavy boundary.

2Bt—61 to 80 inches; strong brown (7.5YR 5/6) silty clay loam; moderate coarse subangular blocky structure; firm; many prominent gray (10YR 5/1) clay films on faces of peds; common medium and coarse yellowish red (5YR 5/6) masses of iron accumulation in the matrix; common coarse prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid.

Range in Characteristics

Thickness of the loess: 16 to 40 inches
Depth to a fragipan: 20 to 40 inches; 12 to 20 inches in severely eroded areas

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE or EB horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—silt loam
Reaction—commonly very strongly acid or strongly acid; less commonly ranges to neutral in the upper part

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid

Btx horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 to 8
Texture—commonly silt loam or silty clay loam; less commonly loam
Reaction—very strongly acid or strongly acid

2Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 to 8
Texture—silty clay loam, clay loam, loam, or silt loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 10 percent gravel

Haymond Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Haymond silt loam, in a nearly level area in a cultivated field; 1,800 feet east and 300 feet north of the southwest corner of sec. 2, T. 1 S., R. 11 W., Knox County, Indiana; USGS Patoka, Indiana, topographic quadrangle; lat. 38 degrees 27 minutes 04 seconds N. and long. 87 degrees 36 minutes 19 seconds W., NAD 27 (UTM Zone 16, 447182 easting and 4256048 northing, NAD 83):

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; common fine roots; slightly acid; abrupt smooth boundary.

Bw1—10 to 25 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; common fine roots; common distinct brown (10YR 4/3) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bw2—25 to 44 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; few distinct dark yellowish brown (10YR 4/4) organic coatings on faces of peds; neutral; clear smooth boundary.

C—44 to 60 inches; yellowish brown (10YR 5/4) fine sandy loam; massive with weak bedding planes; friable; slightly alkaline.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 60 inches

Ap or A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—moderately acid to neutral

C horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam, loam, fine sandy loam, or sandy loam or stratified with these textures
Reaction—slightly acid to slightly alkaline
Content of rock fragments—0 to 5 percent gravel

Hickory Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Hickory loam, on a slope of 35 percent in a forested area; 1,305 feet west and 845 feet north of the center of sec. 22, T. 4 N., R. 7 E., Scott County, Indiana; USGS Deputy, Indiana, topographic quadrangle; lat. 38 degrees 46 minutes 29 seconds N. and long. 85 degrees 44 minutes 05 seconds W., NAD 27 (UTM Zone 16, 609913 easting and 4292544 northing, NAD 83):

A—0 to 4 inches; 80 percent very dark brown (10YR 2/2) and 20 percent yellowish brown (10YR 5/4) loam, dark grayish brown (10YR 4/2) and very pale brown (10YR 7/4) dry; moderate medium granular structure; very friable; many fine roots; 2 percent gravel; very strongly acid; abrupt smooth boundary.
E—4 to 11 inches; yellowish brown (10YR 5/4) loam; weak fine subangular blocky structure parting to moderate medium granular; friable; common fine and medium roots; few fine rounded iron and manganese concretions; 2 percent gravel; very strongly acid; clear smooth boundary.
Bt1—11 to 20 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; common fine and medium roots between peds; common faint yellowish brown (10YR 5/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common medium rounded iron and manganese concretions; 3 percent gravel; strongly acid; clear wavy boundary.
Bt2—20 to 29 inches; yellowish brown (10YR 5/6) clay loam; moderate medium and coarse subangular blocky structure; firm; few fine and medium roots between peds; many distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common medium irregular iron and manganese concretions; 2 percent gravel; very strongly acid; clear wavy boundary.
Bt3—29 to 39 inches; yellowish brown (10YR 5/6) loam; moderate coarse subangular blocky structure; firm; few fine and medium roots between peds; many distinct brown (7.5YR 4/4) clay films on faces of peds; few distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; few medium irregular black (10YR 2/1) masses of iron and manganese accumulation in the matrix; 3 percent gravel; very strongly acid; gradual wavy boundary.
BCt—39 to 45 inches; yellowish brown (10YR 5/6) loam; weak coarse subangular blocky structure; firm; few fine roots between peds; common distinct brown (7.5YR

4/4) clay films on faces of peds; 6 percent gravel; slightly alkaline; gradual wavy boundary.

CB—45 to 51 inches; yellowish brown (10YR 5/6) loam; massive; firm; very few distinct brown (7.5YR 4/4) clay films in root channels; 6 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.

C—51 to 60 inches; light yellowish brown (10YR 6/4) loam; massive; firm; 6 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 20 inches
Depth to the base of the argillic horizon: 40 to 80 inches
Depth to carbonates: More than 40 inches

A horizon:
Thickness—1 to 4 inches
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture—silt loam or loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 5 percent gravel

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam, loam, or clay loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 5 percent gravel

E horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—silt loam or loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 5 percent gravel

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 10 percent gravel

BCt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or loam
Reaction—moderately acid to slightly alkaline
Content of rock fragments—3 to 14 percent gravel

CB or C horizon:
Hue—10YR
Value—5 or 6

Chroma—3 to 6
Texture—commonly loam or clay loam; less commonly sandy loam
Reaction—slightly alkaline or moderately alkaline
Content of rock fragments—3 to 14 percent gravel

Huntington Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fluventic Hapludolls

Typical Pedon

Huntington silt loam, in a nearly level area in a cultivated field; 100 feet south and 900 feet west of the northeast corner of sec. 28, T. 3 S., R. 6 E., Floyd County, Indiana; USGS Louisville West, Indiana, topographic quadrangle; lat. 38 degrees 13 minutes 36 seconds N. and long. 85 degrees 51 minutes 06 seconds W., NAD 27 (UTM Zone 16, 600498 easting and 4231619 northing, NAD 83):

A—0 to 12 inches; dark brown (10YR 3/3) (rubbed) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

Bw1—12 to 36 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; clear wavy boundary.

Bw2—36 to 42 inches; brown (10YR 4/3) silt loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; few fine roots; common distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; clear wavy boundary.

BC—42 to 80 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; neutral.

Range in Characteristics

Thickness of the mollic epipedon: Commonly 10 to 14 inches; ranges to 24 inches
Depth to the base of the cambic horizon: 60 to more than 80 inches

A or Ap horizon:
Hue—10YR
Value—2 or 3
Chroma—2 or 3
Texture—silt loam
Reaction—moderately acid to neutral

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

BC horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam, silty clay loam, sandy loam, or loam
Reaction—moderately acid to slightly alkaline

Jennings Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Fragiudults

Typical Pedon

Jennings silt loam, on a slope of 5 percent in a cultivated field; 1,030 feet east and 890 feet south of the northwest corner of sec. 16, T. 3 N., R. 7 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 42 minutes 20 seconds N. and long. 85 degrees 44 minutes 31 seconds W., NAD 27 (UTM Zone 16, 609395.6 easting and 4284853.9 northing, NAD 83):

Ap—0 to 9 inches; 75 percent brown (10YR 4/3) and 25 percent yellowish brown (10YR 5/6) silt loam, light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/6) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; common fine and very fine roots; common fine iron and manganese concretions; neutral; abrupt smooth boundary.

Bt1—9 to 21 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; common distinct brownish yellow (10YR 6/6) silt coatings on faces of peds; common distinct dark yellowish brown (10YR 4/4) organic coatings on faces of peds; common fine iron and manganese concretions; slightly acid; clear wavy boundary.

Bt2—21 to 27 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; common distinct strong brown (7.5YR 4/6) and few grayish brown (10YR 5/2) clay films on faces of peds; many distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common fine iron and manganese concretions; very strongly acid; gradual wavy boundary.

2Btx—27 to 38 inches; yellowish brown (10YR 5/6) silt loam; moderate very coarse prismatic structure parting to moderate thick platy; very firm; few very fine roots between peds; common prominent grayish brown (10YR 5/2) clay films on vertical faces of peds; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few red (2.5YR 5/6) iron stains on faces of peds and in pores; common fine iron and manganese concretions; common distinct light gray (10YR 7/2) clay depletions on faces of peds; 1 percent gravel; 65 percent brittle; very strongly acid; gradual wavy boundary.

3Btb1—38 to 49 inches; strong brown (7.5YR 5/6) clay loam; weak very coarse prismatic structure parting to weak medium subangular blocky; firm; common prominent grayish brown (10YR 5/2) clay films on vertical faces of peds; common distinct brown (7.5YR 4/4) clay films on faces of peds; common fine iron and manganese concretions; few prominent light gray (10YR 7/2) clay depletions on vertical faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 1 percent gravel; very strongly acid; gradual wavy boundary.

3Btb2—49 to 65 inches; strong brown (7.5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; common prominent gray (10YR 6/1) clay films on faces of peds; common prominent red (2.5YR 5/6) iron stains on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; few prominent light gray (10YR 7/2) clay depletions on faces of peds; 2 percent gravel; extremely acid; gradual wavy boundary.

3Btb3—65 to 73 inches; strong brown (7.5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; common prominent gray (10YR 6/1) clay films on faces of peds; common medium faint yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium prominent light brownish gray

(10YR 6/2) iron depletions in the matrix; 2 percent gravel; extremely acid; clear wavy boundary.

4BC—73 to 77 inches; 60 percent brown (7.5YR 4/4) and 40 percent strong brown (7.5YR 5/6) very parachannery silty clay; moderate medium platy structure; firm; many medium distinct brown (7.5YR 5/2) iron depletions in the matrix; 50 percent parachanners (shale); extremely acid; abrupt wavy boundary.

4Cr—77 to 79 inches; black (10YR 2/1) and dark brown (7.5YR 3/4), weakly cemented shale bedrock; abrupt wavy boundary.

4R—79 to 89 inches; black, fissile, very strongly cemented shale bedrock.

Range in Characteristics

Thickness of the loess: 30 to 50 inches
Depth to a fragipan: 20 to 32 inches; 15 to 20 inches in severely eroded areas
Depth to the base of the argillic horizon: 50 to 75 inches
Depth to bedrock (lithic contact): 60 to 90 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Thickness—2 to 5 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid; ranges to neutral in the upper part in limed areas

2Btx horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—commonly silt loam; less commonly loam or silty clay loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 or 2 percent fine gravel

3Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 6
Texture—commonly clay loam; less commonly silty clay loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—2 to 10 percent gravel

4BC, 4CB, or 4Btb horizon:
Hue—7.5YR or 10YR

Value—4 or 5
Chroma—4 to 6
Texture—silty clay loam or silty clay or the parachannery to extremely parachannery analogs of these textures
Reaction—extremely acid or very strongly acid
Content of pararock fragments—5 to 70 percent parachanners

4Cr horizon (if it occurs):
Thickness—2 to 7 inches
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 4

Jessietown Series

Taxonomic classification: Fine-silty, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Jessietown silt loam, on a slope of 36 percent in a forested area; 400 feet southeast of the northwest boundary and 550 feet northeast of the southwest boundary in Clark Grant No. 297, Scott County, Indiana; USGS Blocher, Indiana, topographic quadrangle; lat. 38 degrees 38 minutes 19 seconds N. and long. 85 degrees 41 minutes 18 seconds W., NAD 27 (UTM Zone 16, 614159 easting and 4277496 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves from mixed deciduous trees.
A—1 to 6 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; strong fine granular structure; friable; many fine and medium and few coarse roots; 1 percent parachanners (shale); very strongly acid; abrupt smooth boundary.
Bt1—6 to 15 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine subangular blocky structure; friable; common very fine to coarse and few very coarse roots; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; 7 percent parachanners (shale); very strongly acid; clear wavy boundary.
2Bt2—15 to 24 inches; dark yellowish brown (10YR 4/6) very parachannery silty clay loam; moderate fine subangular blocky structure; friable; common fine and medium and few coarse roots; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; 35 percent parachanners (shale); 5 percent channers (shale); extremely acid; clear wavy boundary.
2CB—24 to 31 inches; 60 percent brown (7.5YR 4/4) and 40 percent yellowish red (5YR 4/6) extremely parachannery silty clay; weak fine subangular blocky structure; firm; few fine and medium roots; 60 percent parachanners (shale); 5 percent channers (shale); very strongly acid; abrupt wavy boundary.
2R—31 to 40 inches; fractured, very strongly cemented black shale.

Range in Characteristics

Depth to bedrock (lithic contact): 20 to 40 inches

A horizon:
Hue—10YR
Value—3 or 4
Chroma—3 or 4
Texture—silt loam
Reaction—extremely acid to strongly acid
Content of pararock fragments—0 to 5 percent parachanners (shale)
Content of rock fragments—0 to 3 percent channers (shale)

Bt or 2Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam or the parachannery or very parachannery analogs of these textures
Reaction—extremely acid to strongly acid
Content of pararock fragments—5 to 50 percent parachanners (shale)
Content of rock fragments—0 to 14 percent channers (shale)

2BC or 2CB horizon:
Hue—7.5YR or 5YR
Value—4
Chroma—4 to 6
Texture—the very parachannery or extremely parachannery analogs of silty clay loam or silty clay
Reaction—extremely acid to strongly acid
Content of pararock fragments—35 to 75 percent parachanners (shale)
Content of rock fragments—0 to 14 percent channers (shale)

Knobcreek Series

Taxonomic classification: Fine-silty over clayey, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Knobcreek silt loam, on a slope of 13 percent in a pasture; 2,050 feet west and 100 feet south of the northeast corner of sec. 36, T. 1 S., R. 4 E., Floyd County, Indiana; USGS Palmyra, Indiana, topographic quadrangle; lat. 38 degrees 23 minutes 19 seconds N. and long. 86 degrees 01 minute 17 seconds W., NAD 27 (UTM Zone 16, 585467 easting and 4249393 northing, NAD 83):

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to moderate fine and medium granular; very friable; strongly acid; abrupt smooth boundary.

Bt1—7 to 11 inches; strong brown (7.5YR 5/6) silty clay loam; moderate very fine and fine subangular blocky structure; friable; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; 1 percent subangular gravel (chert); strongly acid; clear smooth boundary.

Bt2—11 to 16 inches; strong brown (7.5YR 5/6) silty clay loam; moderate very fine and fine subangular blocky structure; friable; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; 1 percent subangular gravel (chert); very strongly acid; clear wavy boundary.

2Bt3—16 to 31 inches; 60 percent yellowish red (5YR 4/6) and 40 percent strong brown (7.5YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; many prominent red (2.5YR 4/6) and common prominent dark yellowish brown (10YR 4/6) clay films on faces of peds; 1 percent subangular gravel (chert); very strongly acid; gradual wavy boundary.

2Bt4—31 to 43 inches; strong brown (7.5YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; common prominent red (2.5YR 4/6), few distinct strong brown (7.5YR 4/6), and few distinct pale brown (10YR 6/3) clay films on faces of peds; 1 percent subangular gravel (chert); very strongly acid; clear wavy boundary.

2Bt5—43 to 51 inches; strong brown (7.5YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; common prominent red (2.5YR 4/6), many faint strong brown (7.5YR 5/6), and very few prominent light gray (10YR 7/2) clay films

on faces of peds; 1 percent subangular gravel (chert); very strongly acid; clear wavy boundary.

2Bt6—51 to 63 inches; yellowish brown (10YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; many prominent dark yellowish brown (10YR 4/6), few prominent red (2.5YR 4/6), and few prominent light gray (10YR 7/2) clay films on faces of peds; 4 percent subangular gravel (chert) and 1 percent subrounded cobbles (chert); moderately acid; clear wavy boundary.

2Bt7—63 to 89 inches; yellowish brown (10YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; common prominent dark yellowish brown (10YR 4/6) and few prominent light gray (10YR 7/2) clay films on faces of peds; few prominent black (10YR 2/1) iron and manganese stains on faces of peds; 2 percent subangular gravel (chert); neutral.

Range in Characteristics

Thickness of the loess: 8 to 20 inches

Depth to the base of the argillic horizon and depth to bedrock (lithic contact): 60 to more than 100 inches

Ap horizon:

Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 14 percent gravel (chert)

A horizon (if it occurs):

Thickness—2 to 4 inches
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—0 to 14 percent gravel (chert)

E or BE horizon (if it occurs):

Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas
Content of rock fragments—0 to 14 percent gravel (chert)

Bt horizon:

Hue—7.5YR or 10YR
Value—4 or 5
Chroma—6 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas
Content of rock fragments—0 to 14 percent gravel (chert)

2Bt horizon:

Hue—2.5YR to 7.5YR; ranges to 10YR in the lower part
Value—4 or 5
Chroma—6 to 8

Texture—commonly silty clay, clay, gravelly silty clay, or gravelly clay
Reaction—very strongly acid or strongly acid in the upper part; ranges to neutral in the lower part
Content of rock fragments—0 to 20 percent gravel (chert) and 0 to 10 percent cobbles, stones, and boulders

Kurtz Series

Taxonomic classification: Fine-silty, mixed, semiactive, mesic Ultic Hapludalfs

Typical Pedon

Kurtz silt loam, on a convex slope of 37 percent in a forested area; 500 feet east and 2,000 feet south of the northwest corner of sec. 19, T. 5 N., R. 5 E., Jackson County, Indiana; USGS Vallonia, Indiana, topographic quadrangle; lat. 38 degrees 51 minutes 42 seconds N. and long. 86 degrees 01 minute 02 seconds W., NAD 27 (UTM Zone 16, 585269 easting and 4301890 northing, NAD 83):

Oi—0 to 1 inch; roots and partially decomposed leaves.
A—1 to 3 inches; grayish brown (10YR 5/2) silt loam, pale brown (10YR 6/3) dry; moderate medium and fine granular structure; friable; many fine and medium roots; 5 percent gravel (ironstone); extremely acid; abrupt smooth boundary.
E—3 to 7 inches; light yellowish brown (2.5Y 6/4) silt loam; moderate medium and fine granular structure; friable; many fine and medium roots; 4 percent gravel (ironstone); extremely acid; clear smooth boundary.
BE—7 to 13 inches; brownish yellow (10YR 6/6) silt loam; moderate medium and fine subangular blocky structure; friable; common medium and coarse roots; 2 percent gravel (ironstone); very strongly acid; clear wavy boundary.
Bt1—13 to 21 inches; yellowish brown (10YR 5/6) silt loam; common fine faint strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; friable; common medium and coarse roots; many distinct light yellowish brown (10YR 6/4) silt coatings over clay films on faces of peds; 2 percent gravel (ironstone); very strongly acid; clear wavy boundary.
Bt2—21 to 37 inches; strong brown (7.5YR 5/6) and light yellowish brown (2.5Y 6/4) silty clay loam; common fine prominent greenish gray (5GY 6/1) and distinct yellowish red (5YR 4/6) mottles; moderate fine and medium subangular blocky structure; firm; common medium and coarse roots; many prominent light yellowish brown (2.5Y 6/4) clay films on faces of peds; 2 percent gravel and cobbles (ironstone); 10 percent parachanners; very strongly acid; gradual wavy boundary.
CB—37 to 47 inches; light olive brown (2.5Y 5/4) extremely parachannery silty clay loam; weak medium and fine subangular blocky structure and thick platy rock structure; firm; many medium prominent gray (5Y 6/1) and greenish gray (5GY 6/1) and common fine distinct strong brown (7.5YR 5/6) mottles; few medium and coarse roots; 5 percent gravel and cobbles (ironstone); 60 percent parachanners; very strongly acid; gradual wavy boundary.
Cr—47 to 60 inches; olive (5Y 4/3), interbedded, moderately cemented siltstone and shale bedrock; light olive gray (5Y 6/2) coatings between fragments; 5 percent gravel and cobbles (ironstone); strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 32 to 48 inches
Depth to bedrock (paralithic contact): 40 to 60 inches
Kind of pararock fragments: Weakly or moderately cemented siltstone or shale
Kind of rock fragments: Indurated ironstone gravel and cobbles

A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 or 3
Texture—silt loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 to 5 percent gravel

E horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 or 4
Texture—silt loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 to 5 percent gravel

BE or Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—4 to 6
Texture—silt loam, silty clay loam, parachannery silt loam, or parachannery silty clay loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 to 5 percent gravel and cobbles
Content of pararock fragments—0 to 30 percent parachanners

CB or BC horizon:
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—3 to 6
Texture—the very parachannery or extremely parachannery analogs of silt loam or silty clay loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—1 to 5 percent gravel and cobbles
Content of pararock fragments—35 to 70 percent parachanners

Cr horizon:
Hue—2.5Y or 5Y
Value—4 to 6
Chroma—3 or 4

Lindside Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fluvaquentic Eutrudepts

Typical Pedon

Lindside silt loam, in a nearly level area in a cultivated field; 990 feet north and 924 feet west of the southeast corner of sec. 21, T. 3 S., R. 6 E., Floyd County, Indiana; USGS Louisville West topographic quadrangle; lat. 38 degrees 13 minutes 58 seconds N. and long. 85 degrees 50 minutes 58 seconds W., NAD 27 (UTM Zone 16, 600691 easting and 4232169 northing, NAD 83):

Ap—0 to 12 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; neutral; clear smooth boundary.
Bw1—12 to 22 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; neutral; gradual smooth boundary.

Bw2—22 to 37 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

Bw3—37 to 42 inches; brown (10YR 4/3) silty clay loam; weak medium subangular blocky structure; friable; common medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix and common medium faint dark grayish brown (10YR 4/2) depleted pore linings; moderately acid; clear smooth boundary.

BC—42 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; common distinct very dark gray (10YR 3/1) iron and manganese stains on faces of peds; common medium distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly acid in the upper part and neutral in the lower part.

Range in Characteristics

Depth to the base of the cambic horizon: 60 to more than 80 inches

Ap or A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam
Reaction—moderately acid to neutral

Bw or BC horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6 above a depth of 20 inches; 1 to 4 below this depth
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

Markland Series

Taxonomic classification: Fine, mixed, active, mesic Typic Hapludalfs

Typical Pedon

Markland silt loam, on a slope of 46 percent in a forested area; 1,200 feet east and 1,650 feet south of the northwest corner of sec. 22, T. 5 S., R. 1 W., Perry County, Indiana; USGS Derby, Indiana, topographic quadrangle; lat. 38 degrees 04 minutes 08 seconds N. and long. 86 degrees 30 minutes 35 seconds W., NAD 27 (UTM Zone 16, 543007 easting and 4213578 northing, NAD 83):

A—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; moderate fine and medium subangular blocky structure; friable; many fine and medium roots; slightly acid; clear wavy boundary.

2Bt1—4 to 15 inches; yellowish brown (10YR 5/6) silty clay; strong medium angular blocky structure; firm; common fine and medium roots between peds; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; strongly acid; clear wavy boundary.

2Bt2—15 to 28 inches; yellowish brown (10YR 5/6) silty clay; strong medium angular blocky structure; firm; common fine and medium roots between peds; common distinct yellowish brown (10YR 5/4) clay films on faces of peds; neutral; clear smooth boundary.

2Btk1—28 to 38 inches; yellowish brown (10YR 5/6) silty clay; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct brown (10YR

5/3) clay films on faces of peds; few fine carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2Btk2—38 to 48 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct brown (10YR 5/3) clay films on faces of peds; many fine and medium carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2Btk3—48 to 59 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine subangular blocky structure; firm; few fine roots between peds; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine and medium carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2BCtk—59 to 80 inches; 90 percent yellowish brown (10YR 5/6) silty clay loam and 10 percent yellowish brown (10YR 5/6) silty clay; weak fine subangular blocky structure; friable; few fine roots between peds; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many fine carbonate nodules; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 3 to 18 inches
Depth to carbonates: 20 to 40 inches; ranges to less than 20 inches in severely eroded areas
Depth to the base of the argillic horizon: 30 to 70 inches

A horizon:
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

Bt horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam
Reaction—very strongly acid to moderately acid

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silty clay
Reaction—very strongly acid to slightly alkaline

2Btk horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silty clay
Reaction—slightly alkaline or moderately alkaline

2BCtk horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—commonly silty clay loam or silty clay; includes strata of silt loam or silt
Reaction—slightly alkaline or moderately alkaline

McGary Series

Taxonomic classification: Fine, mixed, active, mesic Aeric Epiaqualfs

Typical Pedon

McGary silt loam, in a nearly level area in a cultivated field; 2,050 feet east and 700 feet north of the southwest corner of sec. 24, T. 6 N., R. 7 W., Greene County, Indiana; USGS Sandborn, Indiana, topographic quadrangle; lat. 38 degrees 56 minutes 21 seconds N. and long. 87 degrees 08 minutes 30 seconds W., NAD 27 (UTM Zone 16, 487722 easting and 4310041 northing, NAD 83):

Ap—0 to 11 inches; dark grayish brown (10YR 4/2) silt loam, light gray (10YR 7/2) dry; weak coarse subangular blocky structure parting to moderate fine and medium granular; friable; neutral; abrupt smooth boundary.

2Bt—11 to 15 inches; brown (10YR 5/3) silty clay; moderate medium subangular blocky structure; firm; many faint grayish brown (10YR 5/2) clay films on faces of peds; common fine distinct gray (10YR 6/1) iron depletions in the matrix; moderately acid; clear smooth boundary.

2Btg1—15 to 22 inches; grayish brown (10YR 5/2) silty clay; weak fine and medium prismatic structure parting to moderate medium angular blocky; firm; many distinct gray (10YR 5/1) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine black (10YR 2/1) iron and manganese concretions; neutral; clear smooth boundary.

2Btg2—22 to 27 inches; grayish brown (10YR 5/2) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; many distinct gray (10YR 5/1) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; slightly effervescent in places; slightly alkaline; gradual irregular boundary.

2Btg3—27 to 42 inches; gray (10YR 5/1) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common distinct gray (10YR 6/1) clay films on faces of peds; common fine distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; few fine and medium weakly cemented carbonate nodules; slightly effervescent; slightly alkaline; clear irregular boundary.

2BCtkg—42 to 50 inches; gray (10YR 6/1) silty clay; weak coarse angular blocky structure; firm; few faint gray (10YR 5/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium weakly cemented carbonate nodules; strongly effervescent; moderately alkaline; gradual wavy boundary.

2Cg—50 to 60 inches; gray (10YR 6/1), stratified silty clay loam and silty clay; massive; firm; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine and medium weakly cemented carbonate nodules; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 0 to 20 inches

Depth to the base of the argillic horizon: 24 to 50 inches
Depth to carbonates: 22 to 56 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 4
Texture—silt loam
Reaction—moderately acid to neutral

A horizon (if it occurs):
Thickness—1 to 3 inches
Hue—10YR
Value—3 or 4
Chroma—1 to 3

2Bt, 2Btg, Bt, or Btg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay or silty clay loam
Reaction—very strongly acid to neutral in the upper part and neutral or slightly alkaline in the lower part

2BCtkg, 2BCg, or 2BC horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay or silty clay loam
Reaction—neutral to moderately alkaline

2C or 2Cg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—stratified silty clay or silty clay loam; includes thin strata of silt loam
Reaction—slightly alkaline or moderately alkaline

Medora Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Fragiudults

Typical Pedon

Medora silt loam, on a south-facing slope of 8 percent in a cultivated field; 1,195 feet west and 1,400 feet south of the center of sec. 5, T. 5 N., R. 6 E., Jackson County, Indiana; USGS Seymour, Indiana, topographic quadrangle; lat. 38 degrees 53 minutes 58 seconds N. and long. 85 degrees 53 minutes 03 seconds W., NAD 27 (UTM Zone 16, 597091 easting and 4306635 northing, NAD 83):

Ap—0 to 8 inches; dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; moderate medium and coarse granular structure; friable; moderately acid; abrupt smooth boundary.

Bt—8 to 21 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; many light yellowish brown (10YR 6/4) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

2Btx1—21 to 33 inches; yellowish brown (10YR 5/4) silt loam; weak very coarse prismatic structure parting to weak very thick platy; very firm; common fine vesicular pores; many distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; many fine and medium black (N 2.5/) and common fine yellowish red (5YR 5/8) iron and manganese concretions; common prominent light gray (10YR 7/2) clay depletions on faces of peds; common medium distinct light gray (10YR 7/2) iron depletions in the matrix; brittle; very strongly acid; clear wavy boundary.

2Btx2—33 to 45 inches; strong brown (7.5YR 5/6) and yellowish red (5YR 5/6) loam; weak very coarse prismatic structure parting to weak very thick platy; very firm; common fine vesicular pores; many prominent brown (7.5YR 4/4) clay films on faces of peds and in pores; common prominent light brownish gray (10YR 6/2) clay films on vertical faces of peds; few fine and medium black (N 2.5/) iron and manganese concretions; common prominent light gray (10YR 7/2) clay depletions on faces of peds; brittle; very strongly acid; gradual wavy boundary.

3Bt1—45 to 57 inches; yellowish red (5YR 4/6) clay loam; weak very thick platy structure parting to moderate medium angular blocky; firm; common fine pores; many prominent reddish brown (5YR 4/4) clay films on faces of peds; few prominent light brownish gray (10YR 6/2) clay films in root channels; common distinct light brown (7.5YR 6/4) skeletans on faces of peds; very strongly acid; gradual wavy boundary.

3Bt2—57 to 70 inches; yellowish red (5YR 5/6) clay loam; moderate very thick platy structure; firm; many prominent reddish brown (5YR 4/4) clay films on faces of peds; common distinct light brown (7.5YR 6/4) skeletans on faces of peds; very strongly acid; gradual wavy boundary.

3Bt3—70 to 80 inches; red (2.5YR 4/6) sandy clay; weak coarse subangular blocky structure; firm; many prominent dark red (2.5YR 3/6) clay films on faces of peds; common prominent light brown (7.5YR 6/4) skeletans on faces of peds; common medium black (N 2.5/) iron and manganese concretions; 4 percent gravel; very strongly acid.

Range in Characteristics

Thickness of the loess: 12 to 36 inches
Depth to a fragipan: 20 to 36 inches; 12 to 20 inches in severely eroded areas
Depth to the base of the argillic horizon: More than 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—commonly very strongly acid or extremely acid; ranges to neutral in the upper part

2Btx horizon:
Hue—7.5YR or 10YR; ranges to 5YR in the lower part
Value—4 to 6
Chroma—4 to 6
Texture—commonly silt loam or loam; less commonly clay loam or gravelly loam
Reaction—very strongly acid
Content of rock fragments—0 to 15 percent gravel and 0 to 3 percent cobbles

3Bt horizon:
Hue—2.5YR or 5YR; less commonly 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture—commonly clay loam, sandy clay loam, or sandy clay; less commonly clay, gravelly clay loam, or gravelly sandy clay loam
Reaction—strongly acid or very strongly acid
Content of rock fragments—0 to 15 percent gravel and 0 to 3 percent cobbles

Millstone Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Millstone loam, on a slope of 1 percent in a cultivated field; 900 feet south and 760 feet west of the northeast corner of sec. 5, T. 8 S., R. 2 W., Perry County, Indiana; USGS Cloverport, Indiana, topographic quadrangle; lat. 37 degrees 50 minutes 59 seconds N. and long. 86 degrees 38 minutes 42 seconds W., NAD 27 (UTM Zone 16, 531234 easting and 4189207 northing, NAD 83):

Ap—0 to 12 inches; brown (10YR 4/3) loam, light yellowish brown (10YR 6/4) dry; moderate fine granular structure; friable; common fine roots; very strongly acid; abrupt smooth boundary.

Bt1—12 to 18 inches; yellowish brown (10YR 5/6) loam; moderate fine subangular blocky structure; friable; common fine roots between peds; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; 1 percent fine gravel; very strongly acid; clear wavy boundary.

Bt2—18 to 27 inches; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; common fine roots between peds; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt3—27 to 43 inches; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt4—43 to 52 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt5—52 to 59 inches; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt6—59 to 65 inches; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common prominent light yellowish brown (10YR 6/4) skeletans on faces of peds; very strongly acid; clear wavy boundary.

Bt7—65 to 74 inches; brown (7.5YR 4/4) very fine sandy loam; few fine distinct light yellowish brown (10YR 6/4) mottles; moderate fine subangular blocky structure;

friable; common distinct brown (7.5YR 4/4) clay films on faces of peds; very fine sand fillings in vertical cracks; very strongly acid; clear wavy boundary.

Bt8—74 to 80 inches; brown (7.5YR 4/4) loam; weak medium subangular blocky structure; friable; few faint brown (7.5YR 4/4) clay films on faces of peds; few fine irregular black (10YR 2/1) iron and manganese concretions; common fine prominent light gray (10YR 7/2) iron depletions in the matrix; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon: 60 to more than 80 inches
Depth to the base of soil development: More than 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—loam or silt loam
Reaction—very strongly acid to neutral
Content of rock fragments—0 to 5 percent gravel

A horizon (if it occurs):
Thickness—2 to 5 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam or silt loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 5 percent gravel

Bt horizon and BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—above a depth of 40 inches, commonly loam and less commonly clay loam, fine sandy loam, or sandy loam; below a depth of 40 inches, loam, fine sandy loam, very fine sandy loam, gravelly loam, or gravelly sandy loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—0 to 12 percent above a depth of 40 inches; ranges to 34 percent below that depth

Montgomery Series

Taxonomic classification: Fine, mixed, active, mesic Vertic Endoaquolls

Typical Pedon

Montgomery silty clay loam, in a slightly concave depression in a cultivated field; 2,500 feet west and 380 feet north of the southeast corner of sec. 26, T. 6 N., R. 7 W., Greene County, Indiana; USGS Sandborn, Indiana, topographic quadrangle; lat. 38 degrees 55 minutes 25 seconds N. and long. 87 degrees 09 minutes 25 seconds W., NAD 27 (UTM Zone 16, 486384 easting and 4308319 northing, NAD 83):

Ap—0 to 11 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; friable; slightly acid; abrupt smooth boundary.

A—11 to 15 inches; black (10YR 2/1) silty clay, dark gray (10YR 4/1) dry; moderate medium angular blocky structure; firm; neutral; clear wavy boundary.

Bg1—15 to 24 inches; dark gray (10YR 4/1) silty clay; weak coarse prismatic structure parting to moderate coarse angular blocky; firm; common faint dark gray (10YR 4/1) pressure faces on peds; common fine distinct brown (10YR 5/3) masses of iron accumulation in the matrix; common fine black (10YR 2/1) iron and manganese concretions; krotovinas of dark gray (10YR 4/1) silty clay 1 to 2 inches in diameter and 8 to 12 inches apart extend vertically throughout; neutral; gradual irregular boundary.

Bg2—24 to 29 inches; grayish brown (2.5Y 5/2) silty clay; weak coarse prismatic structure parting to moderate medium and coarse angular blocky; firm; common distinct gray (10YR 5/1) pressure faces on peds; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine black (10YR 2/1) iron and manganese concretions; krotovinas of gray (10YR 5/1) silty clay 1 to 2 inches in diameter and 8 to 12 inches apart extend vertically throughout; slightly effervescent; slightly alkaline; gradual smooth boundary.

Bg3—29 to 38 inches; gray (10YR 6/1) silty clay loam; weak coarse prismatic structure parting to weak coarse angular blocky; firm; few distinct gray (10YR 5/1) pressure faces on peds; many fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; common fine black (10YR 2/1) iron and manganese concretions; few fine calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay 1 to 2 inches in diameter and 8 to 12 inches apart extend vertically throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

BCg—38 to 48 inches; gray (10YR 6/1) silty clay loam; weak coarse prismatic structure parting to weak coarse angular blocky; firm; few distinct gray (10YR 5/1) pressure faces on peds; many medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; many fine calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay 1 to 2 inches in diameter and 8 to 12 inches apart extend vertically throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

Cg—48 to 60 inches; gray (10YR 5/1) silty clay loam; weak medium and coarse angular blocky structure (geogenic); firm; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; many fine calcium carbonate nodules; krotovinas of gray (10YR 5/1) silty clay 1 to 2 inches in diameter and 8 to 12 inches apart extend vertically throughout; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to 60 inches
Content of clay in the particle-size control section: Averages 40 to 50 percent
Content of sand in the particle-size control section: Averages 2 to 10 percent

Ap and A horizons:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—commonly silty clay loam or silty clay; less commonly silt loam
Reaction—slightly acid or neutral

Bg horizon (upper part):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay
Reaction—slightly acid to slightly alkaline

Bg horizon (lower part), BC horizon, or BCg horizon (if it occurs):
Hue—10YR, 2.5Y, or 5Y

Value—4 to 6
Chroma—1 to 6
Texture—silty clay or silty clay loam
Reaction—slightly alkaline or moderately alkaline

Cg or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—commonly silty clay or silty clay loam or stratified with these textures; includes thin strata of silt loam
Reaction—slightly alkaline or moderately alkaline

Nabb Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Fragiudalfs

Typical Pedon

Nabb silt loam, on a slope of 3 percent in a cultivated field; 1,190 feet west and 830 feet south of the center of sec. 21, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 46 minutes 12 seconds N. and long. 85 degrees 45 minutes 11 seconds W., NAD 27 (UTM Zone 16, 608328 easting and 4291998 northing, NAD 83):

Ap—0 to 7 inches; 75 percent dark yellowish brown (10YR 4/4) and 25 percent brownish yellow (10YR 6/6) silt loam, very pale brown (10YR 7/3) dry; moderate fine granular structure; friable; common very fine roots; few fine rounded black (10YR 2/1) iron and manganese concretions; strongly acid; abrupt smooth boundary.

BE—7 to 13 inches; brownish yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; common very fine roots; few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; very strongly acid; clear wavy boundary.

Bt—13 to 20 inches; brownish yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; few very fine roots; few faint yellowish brown (10YR 5/6) clay films on faces of peds; common distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; few fine prominent light gray (10YR 7/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

Bt/BE—20 to 33 inches; 65 percent yellowish brown (10YR 5/4) silty clay loam (Bt); moderate medium prismatic structure parting to moderate coarse subangular blocky; firm; few very fine roots; many distinct light brownish gray (10YR 6/2) and brown (10YR 5/3) clay films on faces of peds; many distinct pale brown (10YR 6/3) clay depletions on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 35 percent light yellowish brown (10YR 6/4) silt loam (BE) krotovinas and fillings of former root channels; weak fine subangular blocky structure; friable; few very fine roots; very strongly acid; gradual wavy boundary.

2Btx/Bt—33 to 53 inches; 65 percent yellowish brown (10YR 5/8) silt loam (Btx); moderate very coarse prismatic structure parting to weak very thick platy; very firm; common prominent gray (10YR 6/1) clay films on faces of vertical peds; brittle; 35 percent yellowish brown (10YR 5/6) silt loam (Bt); weak medium subangular blocky structure; friable; common fine prominent light gray (10YR 7/2) iron depletions in the matrix; in both parts of the horizon, few fine rounded black

(10YR 2/1) iron and manganese concretions; 1 percent fine and medium gravel; very strongly acid; gradual wavy boundary.

2Btx—53 to 71 inches; yellowish brown (10YR 5/8) silt loam; moderate very coarse prismatic structure; firm; few prominent gray (10YR 6/1) clay films on faces of peds; few fine rounded black (10YR 2/1) iron and manganese concretions; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 1 percent fine and medium gravel; 75 percent brittle; very strongly acid; diffuse wavy boundary.

3Btb—71 to 80 inches; strong brown (7.5YR 5/8) clay loam; moderate coarse subangular blocky structure; firm; common prominent gray (10YR 5/1) clay films on faces of peds; common medium irregular black (10YR 2/1) iron and manganese concretions; common medium prominent gray (10YR 6/1) iron depletions in the matrix; 8 percent gravel; moderately acid.

Range in Characteristics

Thickness of the loess: 60 to 90 inches
Depth to a fragipan: 24 to 40 inches
Depth to the base of the argillic horizon: More than 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE or EB horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in limed areas

Bt or Bt/BE horizon:
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam or silty clay loam in the Bt part; silt loam in the BE part
Reaction—extremely acid to strongly acid

2Btx/Bt or 2Btx horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—1 or 2 percent fine or medium gravel

3Btb horizon:
Hue—7.5YR or 10YR

Value—5 or 6
Chroma—6 to 8; less commonly chroma of 2 in pedons that have hue of 10YR and value of 6
Texture—commonly clay loam; less commonly loam
Reaction—strongly acid to neutral
Content of rock fragments—4 to 10 percent gravel

Navilleton Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Navilleton silt loam, on a slope of 7 percent in a pasture; 2,100 feet west and 540 feet south of the northeast corner of sec. 36, T. 1 S., R. 4 E., Floyd County, Indiana; USGS Palmyra topographic quadrangle; lat. 38 degrees 23 minutes 16 seconds N. and long. 86 degrees 01 minute 18 seconds W., NAD 27 (UTM Zone 16, 585444 easting and 4249300 northing, NAD 83):

Ap1—0 to 5 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine and medium subangular blocky structure parting to moderate medium granular; very friable; strongly acid; clear smooth boundary.

Ap2—5 to 8 inches; 70 percent dark yellowish brown (10YR 4/4) and 30 percent strong brown (7.5YR 5/6) silt loam; moderate fine and medium subangular blocky structure parting to weak fine and medium granular; very friable; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; moderately acid; clear smooth boundary.

Bt1—8 to 12 inches; strong brown (7.5YR 5/6) silt loam; moderate fine subangular blocky structure; friable; common distinct strong brown (7.5YR 4/6) clay films on faces of peds; few prominent dark yellowish brown (10YR 4/4) organic coatings on faces of peds and in pores; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; moderately acid; clear smooth boundary.

Bt2—12 to 25 inches; dark yellowish brown (10YR 4/6) silty clay loam; moderate fine and medium subangular blocky structure; friable; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; moderately acid; clear smooth boundary.

Bt3—25 to 35 inches; dark yellowish brown (10YR 4/6) silty clay loam; moderate fine subangular blocky structure; friable; many distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common distinct strong brown (7.5YR 4/6) clay films on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; moderately acid; clear wavy boundary.

2Bt4—35 to 43 inches; strong brown (7.5YR 4/6) silty clay; moderate fine subangular blocky structure; friable; common prominent pale brown (10YR 6/3) and common prominent brown (7.5YR 4/4) clay films on faces of peds; common fine rounded black (10YR 2/1) iron and manganese concretions throughout; 3 percent subrounded chert gravel; strongly acid; clear wavy boundary.

2Bt5—43 to 54 inches; yellowish red (5YR 5/6) clay; moderate very fine and fine angular blocky structure; firm; many prominent yellowish red (5YR 4/6) and few prominent brown (10YR 5/3) clay films on faces of peds; common fine and medium rounded black (10YR 2/1) iron and manganese concretions throughout; 3 percent angular chert gravel; neutral; clear wavy boundary.

2Bt6—54 to 61 inches; yellowish red (5YR 4/6) clay; moderate very fine angular blocky structure; firm; many distinct yellowish red (5YR 4/6) clay films on faces of peds; common fine and medium rounded black (10YR 2/1) iron and manganese

concretions throughout; 3 percent angular chert gravel; neutral; clear wavy boundary.

2Bt7—61 to 72 inches; strong brown (7.5YR 4/6) silty clay; moderate fine angular blocky structure; firm; many prominent dark yellowish brown (10YR 4/4), few prominent very dark grayish brown (10YR 3/2), and few prominent strong brown (7.5YR 5/6) clay films on faces of peds; 3 percent angular chert gravel and 3 percent limestone flagstones; slightly alkaline; slightly effervescent from a depth of 71 to 72 inches; abrupt wavy boundary.

2R—72 to 80 inches; indurated limestone bedrock.

Range in Characteristics

Thickness of the loess: 20 to 40 inches

Depth to the base of the argillic horizon and depth to bedrock (lithic contact): 60 to more than 100 inches

Ap horizon:

Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):

Thickness—2 to 4 inches
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE horizon (if it occurs):

Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas

Bt horizon:

Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas

2Bt horizon:

Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay or clay
Reaction—very strongly acid or strongly acid in the upper part; ranges to slightly alkaline in the lower part
Content of rock fragments—0 to 14 percent chert gravel and cobbles; includes a few flagstones, stones, or boulders

Newark Series

Taxonomic classification: Fine-silty, mixed, active, nonacid, mesic Fluventic Endoaquepts

Typical Pedon

Newark silt loam, in a nearly level area in a cultivated field; 1,000 feet south of the railroad and 400 feet west of Willett Road, Daviess County, Kentucky; USGS Owensboro West, Kentucky, topographic quadrangle; lat. 37 degrees 48 minutes 18.6 seconds N. and long. 87 degrees 11 minutes 18.1 seconds W., NAD 27 (UTM Zone 16, 483758 easting and 4184394 northing, NAD 83):

Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many fine roots; slightly acid; abrupt smooth boundary.

Bw—9 to 15 inches; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; few fine roots; many fine and medium faint light brownish gray (10YR 6/2) iron depletions in the matrix; few small flakes of mica; slightly acid; gradual smooth boundary.

Bg—15 to 32 inches; light brownish gray (2.5Y 6/2) silt loam; weak medium subangular blocky structure; very friable; many medium distinct brown (10YR 4/3) masses of iron accumulation in the matrix; few small flakes of mica; slightly acid; gradual smooth boundary.

Cg—32 to 52 inches; light brownish gray (2.5Y 6/2) silt loam; massive; very friable; common coarse distinct yellowish brown (10YR 5/4) and common medium faint brown (10YR 5/3) masses of iron accumulation in the matrix; few weakly cemented irregularly shaped black (N 2.5/) and dark brown (7.5YR 3/3) iron and manganese nodules; common medium faint light gray (10YR 7/2) iron depletions in the matrix; few small flakes of mica; slightly acid; gradual smooth boundary.

C—52 to 60 inches; brown (10YR 4/3) silt loam with thin strata of loam and silty clay loam; massive; very friable; few weakly cemented irregularly shaped black (N 2.5/) and dark brown (7.5YR 3/3) iron and manganese nodules; many medium and coarse distinct gray (10YR 6/1) iron depletions in the matrix; few small flakes of mica; slightly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 30 to more than 80 inches

Ap horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

Bw horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

Bg or BCg horizon:
Hue—10YR, 2.5Y, or N
Value—4 to 7
Chroma—0 to 2

Texture—silt loam or silty clay loam
Reaction—moderately acid to neutral

Cg horizon:
Hue—10YR, 2.5Y, or N
Value—4 to 7
Chroma—0 to 2
Texture—silt loam or silty clay loam; thin strata of loam or fine sandy loam included below a depth of 40 inches
Reaction—moderately acid to slightly alkaline

C horizon (if it occurs):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 or 4
Texture—silt loam or silty clay loam; thin strata of loam or fine sandy loam included below a depth of 40 inches
Reaction—moderately acid to slightly alkaline

Oldenburg Series

Taxonomic classification: Coarse-loamy, mixed, active, mesic Fluvaquentic Eutrudepts

Typical Pedon

Oldenburg silt loam, on a slope of 1 percent in a cultivated field; 800 feet west and 1,800 feet south of the northeast corner of sec. 13, T. 10 N., R. 11 E., Franklin County, Indiana; USGS Batesville, Indiana, topographic quadrangle; lat. 39 degrees 19 minutes 05 seconds N. and long. 85 degrees 14 minutes 33 seconds W., NAD 27 (UTM Zone 16, 651508 easting and 4353551 northing, NAD 83):

Ap—0 to 9 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

Bw1—9 to 17 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; friable; many fine roots; common distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; clear wavy boundary.

Bw2—17 to 25 inches; brown (10YR 4/3) loam; weak fine subangular blocky structure; friable; common fine roots; common brown (10YR 4/3) organic coatings on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

Bw3—25 to 39 inches; brown (10YR 5/3) fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; few brown (10YR 4/3) organic coatings on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

C1—39 to 46 inches; brown (10YR 5/3) fine sandy loam; massive; friable; few fine roots; few fine faint light brownish gray (10YR 6/2) and grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

C2—46 to 53 inches; brown (10YR 5/3) loamy sand; massive; very friable; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; 1 percent gravel; neutral; clear wavy boundary.

C3—53 to 60 inches; brown (10YR 5/3) fine sandy loam; massive; friable; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; 1 percent gravel; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 22 to 44 inches

Ap or A horizon:
Hue—10YR
Value—4 or 5
Chroma—3
Texture—silt loam or loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 10 percent gravel

Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—loam, silt loam, fine sandy loam, or sandy loam; includes thin strata of loamy sand or loamy fine sand
Reaction—strongly acid to neutral
Content of rock fragments—0 to 10 percent gravel

C or Cg horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 4
Texture—fine sandy loam, sandy loam, or loam; includes strata of sandy clay loam, loamy sand, loamy fine sand, or the gravelly analogs of all these textures
Reaction—moderately acid to neutral
Content of rock fragments—0 to 34 percent gravel and 0 to 5 percent cobbles

Pekin Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aquic Fragiudults
Taxadjunct features: The Pekin soils in this survey area do not have a subhorizon with a fragipan that has vertical streaks with a mean horizontal dimension of 4 inches or more. This difference, however, does not alter the usefulness or behavior of the soils. These soils are classified as fine-silty, mixed, active, mesic Fragiaquic Hapludults.

Typical Pedon

Pekin silt loam, on a slope of 3 percent in a cultivated field; 2,300 feet east and 2,100 feet south of the northwest corner of sec. 23, T. 2 S., R. 5 E., Floyd County, Indiana; USGS Georgetown, Indiana, topographic quadrangle; lat. 38 degrees 19 minutes 30 seconds N. and long. 85 degrees 55 minutes 48 seconds W., NAD 27 (UTM Zone 16, 593530 easting and 4242423 northing, NAD 83):

Ap—0 to 10 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.
Bt1—10 to 16 inches; yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; friable; few faint yellowish brown (10YR 5/4) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt2—16 to 24 inches; yellowish brown (10YR 5/4) silt loam; moderate medium and fine subangular blocky structure; friable; common distinct yellowish brown (10YR 5/6) clay films on faces of peds; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; strongly acid; clear smooth boundary.

Btx1—24 to 29 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine vesicular pores; many distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 35 percent brittle; strongly acid; gradual wavy boundary.

Btx2—29 to 45 inches; yellowish brown (10YR 5/6) silt loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine vesicular pores; many prominent grayish brown (10YR 5/2) and common distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 45 percent brittle; extremely acid; gradual wavy boundary.

C—45 to 60 inches; yellowish brown (10YR 5/6) silt loam; massive; firm; many medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid.

Range in Characteristics

Thickness of the loess: 0 to 40 inches
Depth to a layer with fragic soil properties: 20 to 38 inches; 10 to 20 inches in severely eroded areas
Depth to the base of the argillic horizon: 40 to 70 inches

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—commonly very strongly acid or strongly acid; ranges to neutral in the upper part

Btx or Btxg horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 8
Texture—silt loam or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—0 to 7 percent gravel

C or Cg horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 6
Texture—silt loam, silty clay loam, or loam; less commonly sandy loam or fine sandy loam

Reaction—very strongly acid to neutral
Content of rock fragments—0 to 14 percent gravel

Peoga Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Fragic Epiaqualfs

Typical Pedon

Peoga silt loam, in a nearly level area in a cultivated field; 1,810 feet east and 645 feet north of the center of sec. 18, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 47 minutes 18 seconds N. and long. 85 degrees 46 minutes 45 seconds W., NAD 27 (UTM Zone 16, 606032 easting and 423788 northing, NAD 83):

Ap—0 to 8 inches; light brownish gray (10YR 6/2) silt loam, light gray (10YR 7/1) dry; weak coarse subangular blocky structure parting to moderate medium granular; friable; few very fine roots; many fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; common prominent yellowish red (5YR 5/6) pore linings; common prominent black (N 2.5/) iron and manganese stains; krotovinas filled with brown (10YR 5/3) material; moderately acid; abrupt smooth boundary.

BEg—8 to 19 inches; light gray (10YR 7/2) silt loam; weak medium subangular blocky structure; friable; few very fine roots; common fine prominent reddish yellow (7.5YR 6/8) and common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common prominent black (N 2.5/) iron and manganese stains in pores and root channels; krotovinas filled with brown (10YR 5/3) material; very strongly acid; gradual wavy boundary.

Btg1—19 to 27 inches; light gray (10YR 7/2) silt loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; common distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; common fine prominent reddish yellow (7.5YR 6/8) and common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; common prominent black (N 2.5/) iron and manganese stains on vertical faces of peds; krotovinas filled with brown (10YR 5/3) material; very strongly acid; gradual wavy boundary.

Btg2—27 to 36 inches; light gray (10YR 7/2) silt loam; moderate coarse prismatic structure parting to moderate coarse subangular blocky; friable; few very fine roots between peds; many distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; common fine prominent reddish yellow (7.5YR 6/8) and common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common prominent black (N 2.5/) iron and manganese stains on vertical faces of peds; krotovinas filled with brown (10YR 5/3) material; very strongly acid; gradual irregular boundary.

Btgx1—36 to 58 inches; 65 percent light gray (10YR 7/2) and 35 percent strong brown (7.5YR 5/6) silt loam; moderate coarse prismatic structure; firm; many distinct light brownish gray (10YR 6/2) clay films on vertical faces of peds; common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common prominent black (N 2.5/) iron and manganese stains on vertical faces of peds; 35 percent brittle; very strongly acid; gradual wavy boundary.

Btgx2—58 to 76 inches; 65 percent light gray (10YR 7/2) and 35 percent yellowish brown (10YR 5/6) silt loam; moderate coarse prismatic structure; firm; common prominent light brownish gray (10YR 6/2) clay films on vertical faces of peds; 35 percent brittle; strongly acid; diffuse wavy boundary.

2Btb—76 to 80 inches; strong brown (7.5YR 5/6) silty clay loam; moderate coarse subangular blocky structure; firm; common distinct light brownish gray (10YR 6/2)

clay films on vertical and horizontal faces of peds; few fine faint yellowish red (5YR 5/6) masses of iron accumulation in the matrix; common coarse irregular iron and manganese concretions; many medium prominent light gray (10YR 7/2) iron depletions in the matrix; strongly acid.

Range in Characteristics

Thickness of the loess: 20 to 40 inches
Depth to a layer with fragic soil properties: 30 to 45 inches
Depth to the base of the argillic horizon: 55 to more than 80 inches

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid or strongly acid

Eg, EBg, or BEg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Texture—silt loam
Reaction—extremely acid to strongly acid

Btg, Bt, Btxg, or Btx horizon:
Hue—7.5YR to 5Y
Value—5 to 7
Chroma—1 to 6
Texture—silt loam or silty clay loam; loam or clay loam included in the lower part
Reaction—extremely acid to strongly acid; ranges to moderately acid in the lower part
Content of rock fragments—0 to 2 percent gravel

2Btb or 2Btg horizon:
Hue—7.5YR or 10YR
Value—5
Chroma—1 to 6
Texture—silt loam, silty clay loam, clay loam, or loam
Reaction—strongly acid to neutral
Content of rock fragments—0 to 2 percent gravel

Rarden Series

Taxonomic classification: Fine, mixed, active, mesic Aquultic Hapludalfs

Typical Pedon

Rarden silty clay loam, on a slope of 7 percent in a cultivated field; 1,040 feet east and 560 feet north of the southwest corner of sec. 9, T. 2 N., R. 7 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 37 minutes 19

seconds N. and long. 85 degrees 45 minutes 10 seconds W., NAD 27 (UTM Zone 16, 608575 easting and 4275568 northing, NAD 83):

Ap—0 to 6 inches; 80 percent dark yellowish brown (10YR 4/4) and 20 percent yellowish red (5YR 4/6) silty clay loam, pale brown (10YR 6/3) and yellowish red (5YR 5/6) dry; weak fine and medium subangular blocky structure; firm; common very fine and fine and few medium roots; slightly acid; clear wavy boundary.

2Bt1—6 to 14 inches; yellowish red (5YR 4/6) silty clay; moderate fine subangular blocky structure; firm; common very fine and fine roots between peds; many distinct strong brown (7.5YR 5/6) clay films on faces of peds; very strongly acid; clear wavy boundary.

2Bt2—14 to 21 inches; strong brown (7.5YR 5/6) silty clay; moderate fine and medium angular blocky structure; firm; few very fine and fine roots between peds; many prominent light olive gray (5Y 6/2) and common distinct yellowish red (5YR 5/6) clay films on faces of peds; common fine prominent light olive gray (5Y 6/2) iron depletions in the matrix; extremely acid; clear wavy boundary.

2Bt3—21 to 28 inches; strong brown (7.5YR 5/6) silty clay; weak fine and medium angular blocky structure; firm; few very fine and fine roots between peds; many prominent light olive gray (5Y 6/2) clay films on faces of peds; many fine prominent light olive gray (5Y 6/2) iron depletions in the matrix; extremely acid; gradual wavy boundary.

2BC—28 to 37 inches; light olive brown (2.5Y 5/4) extremely parachannery silty clay; moderate thin and medium platy structure; firm; few very fine and fine roots between peds; few prominent white (10YR 8/1) barite coatings on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; many fine and medium prominent gray (5Y 6/1) iron depletions in the matrix; common fine and medium platy barite masses; 60 percent weakly cemented parachanners; extremely acid; gradual wavy boundary.

2Cr1—37 to 51 inches; 80 percent olive (5Y 5/3) and 20 percent olive brown (2.5Y 4/4), weakly cemented, fractured shale bedrock; very firm; few very fine roots between shale fragments; common medium distinct light olive gray (5Y 6/2) pore linings between shale fragments; very strongly acid; gradual wavy boundary.

2Cr2—51 to 60 inches; olive (5Y 4/3), moderately cemented, fractured shale bedrock; very firm; common medium faint light olive gray (5Y 6/2) pore linings between shale fragments; slightly acid.

Range in Characteristics

Thickness of the loess: Less than 14 inches
Depth to the base of the argillic horizon: 20 to 40 inches
Depth to bedrock (paralithic contact): 20 to 40 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam
Reaction—extremely acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or silt loam
Reaction—extremely acid or very strongly acid

Bt horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—6 to 8
Texture—silty clay loam
Reaction—extremely acid to strongly acid

2Bt horizon:
Hue—2.5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Texture—commonly silty clay; less commonly clay or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—0 to 5 percent gravel (ironstone)
Content of pararock fragments—0 to 14 percent parachanners

2BC or 2CB horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—4 to 6
Texture—the parachannery to extremely parachannery analogs of silty clay or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—0 to 5 percent gravel (ironstone)
Content of pararock fragments—30 to 70 percent parachanners

2Cr horizon:
Hue—2.5Y or 5Y
Value—4 to 6
Chroma—3 or 4

Rohan Series

Taxonomic classification: Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

Typical Pedon

Rohan channery silt loam, on a slope of 40 percent in a forested area; 450 feet southeast of the northwest boundary and 500 feet northeast of the southwest boundary in Clark Grant No. 297, Scott County, Indiana; USGS Blocher, Indiana, topographic quadrangle; lat. 38 degrees 38 minutes 18 seconds N. and long. 85 degrees 41 minutes 19 seconds W., NAD 27 (UTM Zone 16, 614135 easting and 4277465 northing, NAD 83):

A—0 to 4 inches; very dark grayish brown (10YR 3/2) channery silt loam, grayish brown (10YR 5/2) dry; moderate fine and medium granular structure; friable; common fine and medium and few coarse roots; 28 percent strongly cemented channers (shale); strongly acid; clear wavy boundary.

Bw1—4 to 10 inches; dark brown (7.5YR 3/4) channery silt loam; moderate fine subangular blocky structure; friable; common fine and medium and few coarse roots; 28 percent strongly cemented channers (shale); very strongly acid; clear wavy boundary.

Bw2—10 to 16 inches; brown (7.5YR 4/4) very channery silty clay loam; weak fine subangular blocky structure; friable; few fine and medium roots; 50 percent strongly cemented channers (shale); very strongly acid; abrupt wavy boundary.

R—16 to 40 inches; fractured, very strongly cemented black shale bedrock.

Range in Characteristics

Depth to bedrock (lithic contact): 10 to 20 inches

A horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—2 to 4
Texture—silt loam, channery silt loam, or channery silty clay loam
Reaction—very strongly acid to moderately acid
Content of rock fragments—3 to 34 percent channers (shale)

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—the channery, very channery, or extremely channery analogs of silt loam or silty clay loam
Reaction—extremely acid to strongly acid
Content of rock fragments—15 to 65 percent; averages more than 35 percent channers (shale)

Ryker Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Ryker silt loam (fig. 19), on a slope of 1 percent in a cultivated field; 950 feet south and 2,000 feet west of the northeast corner of sec. 24, T. 3 N., R. 9 E., Jefferson County, Indiana; USGS Madison West topographic quadrangle; lat. 38 degrees 41 minutes 31 seconds N. and long. 85 degrees 28 minutes 05 seconds W., NAD 27 (UTM Zone 16, 633234 easting and 4283719 northing, NAD 83):

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.
BE—6 to 12 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium subangular blocky structure; friable; common fine roots; neutral; clear smooth boundary.
Bt1—12 to 27 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; neutral; gradual wavy boundary.
Bt2—27 to 38 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; many distinct brown (7.5YR 4/4) clay films on faces of peds; few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; strongly acid; gradual wavy boundary.
2Bt3—38 to 58 inches; yellowish red (5YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; many distinct reddish brown (5YR 4/4) clay films in pores and on faces of peds; few distinct pale brown (10YR 6/3) silt coatings on faces of peds; 3 percent fine gravel: very strongly acid; gradual wavy boundary.
2Bt4—58 to 67 inches; yellowish red (5YR 5/6) silty clay loam; weak medium and coarse subangular blocky structure; firm; many distinct reddish brown (5YR 4/4) clay films in pores and on faces of peds; common prominent light yellowish brown (10YR 6/4) silt coatings in channels; 3 percent fine gravel; very strongly acid; clear smooth boundary.
3Bt5—67 to 80 inches; yellowish red (5YR 5/6) silty clay; weak medium and coarse subangular blocky structure; firm; many distinct reddish brown (5YR 4/4) clay films

Figure 19.—A profile of a Ryker soil. Depth is marked in inches.

in pores and on faces of peds; common prominent light yellowish brown (10YR 6/4) silt coatings in channels; 5 percent fine gravel; very strongly acid.

Range in Characteristics

Thickness of the loess: 20 to 40 inches
Depth to the base of the argillic horizon: 60 to more than 80 inches
Depth to bedrock (lithic contact): 60 to more than 100 inches

Ap horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 6

Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Thickness—2 to 5 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—commonly very strongly acid or strongly acid; ranges to neutral in the upper part

2Bt horizon:
Hue—5YR or 7.5YR
Value—4 or 5
Chroma—4 to 8
Texture—commonly loam, silty clay loam, or clay loam; less commonly silt loam
Reaction—very strongly acid or strongly acid
Content of rock fragments—2 to 14 percent gravel

3Bt horizon or 3BC horizon (if it occurs):
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—4 to 8
Texture—silty clay or clay
Reaction—very strongly acid to moderately acid in the upper part; ranges to neutral in the lower part
Content of rock fragments—2 to 14 percent gravel and cobbles (chert and limestone)

Scottsburg Series

Taxonomic classification: Fine-silty, mixed, semiactive, mesic Aquic Hapludults

Typical Pedon

Scottsburg silt loam, on a slope of 3 percent in a cultivated field; 570 feet east and 570 feet north of the southwest corner of sec. 28, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 45 minutes 08 seconds N. and long. 85 degrees 45 minutes 22 seconds W., NAD 27 (UTM Zone 16, 608089 easting and 4290021 northing, NAD 83):

Ap—0 to 8 inches; 80 percent brown (10YR 4/3) and 20 percent yellowish brown (10YR 5/6) silt loam, pale brown (10YR 6/3) and very pale brown (10YR 7/4) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; common very fine roots; strongly acid; abrupt smooth boundary.
Bt1—8 to 19 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct strong brown

(7.5YR 4/6) clay films on faces of peds; common distinct brown (10YR 4/3) organic coatings in root channels and pores; strongly acid; gradual wavy boundary.

Bt2—19 to 27 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; common distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt3—27 to 31 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium subangular blocky structure; friable; few very fine roots; common distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; common fine distinct brown (10YR 5/3) iron depletions in the matrix; very strongly acid; clear wavy boundary.

2Btx1—31 to 43 inches; brown (10YR 5/3) silty clay loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots between peds; common distinct grayish brown (10YR 5/2) clay films on vertical faces of peds; common fine prominent strong brown (7.5YR 5/6) and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 4 percent gravel; 45 percent brittle; extremely acid; gradual wavy boundary.

2Btx2—43 to 53 inches; dark yellowish brown (10YR 4/6) silty clay loam; moderate coarse prismatic structure parting to moderate coarse subangular blocky; firm; many distinct gray (10YR 5/1) clay films on vertical faces of peds; common fine iron and manganese concretions; few fine prominent grayish brown (10YR 5/2) iron depletions in the matrix; 3 percent gravel; 45 percent brittle; extremely acid; clear wavy boundary.

3BCg—53 to 61 inches; grayish brown (10YR 5/2) parachannery silty clay; weak thin platy structure; firm; common medium prominent yellowish brown (10YR 5/6) and many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 20 percent parachanners (shale); extremely acid; clear wavy boundary.

3Cr—61 to 67 inches; very dark grayish brown (10YR 3/2) and dark brown (7.5YR 4/4), fractured, weakly cemented and moderately cemented shale; extremely acid; clear wavy boundary.

3R—67 to 80 inches; very dark gray (5YR 3/1), very strongly cemented, fissile black shale.

Range in Characteristics

Thickness of the loess: 20 to 40 inches
Depth to a layer with fragic soil properties: 24 to 36 inches
Depth to the base of the argillic horizon: 48 to 60 inches
Depth to bedrock (paralithic contact): 60 to 72 inches
Depth to bedrock (lithic contact): 64 to 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—10YR

Value—5 or 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to slightly acid in the upper part in limed areas

2Btx horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

3BC or 3BCg horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 8
Texture—parachannery silty clay loam or parachannery silty clay
Reaction—extremely acid or very strongly acid
Content of pararock fragments—15 to 34 percent parachanners

3Cr horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—1 to 4

Shircliff Series

Taxonomic classification: Fine, mixed, active, mesic Oxyaquic Hapludalfs

Typical Pedon

Shircliff silt loam, on a slope of 3 percent in a cultivated field; 400 feet east and 750 feet north of the southwest corner of sec. 13, T. 5 S., R. 1 W., Perry County, Indiana; USGS Alton, Indiana, topographic quadrangle; lat. 38 degrees 04 minutes 28 seconds N. and long. 86 degrees 28 minutes 05 seconds W., NAD 27 (UTM Zone 16, 546658 easting and 4214214 northing, NAD 83):

Ap—0 to 8 inches; 90 percent brown (10YR 5/3) and 10 percent yellowish brown (10YR 5/6) silt loam, very pale brown (10YR 7/3 and 7/4) dry; weak fine subangular blocky structure; friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt1—8 to 19 inches; yellowish brown (10YR 5/6) silty clay loam; strong fine subangular blocky structure; friable; common fine roots; common distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; many distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

2Bt2—19 to 28 inches; strong brown (7.5YR 5/6) silty clay; moderate medium subangular blocky structure; firm; common fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; few distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions in the matrix; very strongly acid; clear wavy boundary.

2Bt3—28 to 43 inches; dark yellowish brown (10YR 4/4) silty clay; strong coarse angular blocky structure; very firm; few fine roots; many prominent light brownish gray (10YR 6/2) clay films on faces of peds; many medium distinct gray (10YR 6/1) iron depletions in the matrix; moderately acid; clear wavy boundary.

2Btk1—43 to 53 inches; dark yellowish brown (10YR 4/4) silty clay; strong coarse angular blocky structure; very firm; few fine roots; common distinct brown (10YR 5/3) and few distinct light brownish gray (10YR 6/2) clay films on faces of peds; many medium distinct gray (10YR 6/1) iron depletions in the matrix; few medium irregular calcium carbonate nodules; slightly effervescent; moderately alkaline; clear wavy boundary.

2Btk2—53 to 59 inches; brown (10YR 5/3) silty clay loam; moderate coarse subangular blocky structure; very firm; few fine roots; common faint brown (10YR 5/3) and few prominent light brownish gray (10YR 6/2) clay films on faces of peds; many coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common fine faint light brownish gray (10YR 6/2) iron depletions in the matrix; few medium irregular calcium carbonate nodules; strongly effervescent; moderately alkaline; clear wavy boundary.

2Btk3—59 to 80 inches; dark yellowish brown (10YR 4/4) silty clay; strong coarse subangular blocky structure; very firm; common distinct brown (10YR 5/3) and few prominent gray (10YR 6/1) clay films on faces of peds; common fine distinct gray (10YR 6/1) iron depletions in the matrix; few medium irregular calcium carbonate nodules; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: 6 to 20 inches
Depth to carbonates: 30 to 60 inches
Depth to the base of the argillic horizon: 40 to more than 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam or silty clay loam
Reaction—strongly acid to neutral

A horizon (if it occurs):
Thickness—less than 5 inches
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam
Reaction—strongly acid or moderately acid

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to moderately acid

2Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 or 5
Chroma—4 to 6 with redoximorphic depletions
Texture—silty clay loam or silty clay
Reaction—very strongly acid to slightly alkaline

2Btk, 2BCk, 2Btkg, or 2BCkg horizon:
Hue—10YR or 2.5Y

Value—4 to 6
Chroma—2 to 4
Texture—silty clay or silty clay loam; less commonly silt loam
Reaction—slightly alkaline or moderately alkaline

Spickert Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Fragiudults

Typical Pedon

Spickert silt loam (fig. 20), on a slope of 9 percent in a forested area; 1,190 feet east and 1,320 feet south of the center of sec. 28, T. 7 N., R. 2 E., Jackson County, Indiana; USGS Elkinsville, Indiana, topographic quadrangle; lat. 39 degrees 00 minutes 34 seconds N. and long. 86 degrees 18 minutes 17 seconds W., NAD 27 (UTM Zone 16, 560197 easting and 4318060 northing, NAD 83):

Oi—0 to 2 inches; partially decomposed leaves from mixed deciduous trees.

Ap—2 to 7 inches; dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; moderate medium granular structure; friable; many fine and medium and few coarse roots; very strongly acid; clear smooth boundary.

Bt1—7 to 21 inches; strong brown (7.5YR 5/6) silty clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common distinct brown (7.5YR 5/4) clay films on faces of peds; common fine black (10YR 2/1) iron and manganese concretions; very strongly acid; clear wavy boundary.

Bt2—21 to 28 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common distinct strong brown (7.5YR 5/6) clay films on faces of peds; few prominent pale yellow (2.5Y 7/4) silt coatings on faces of peds; common fine black (10YR 2/1) iron and manganese concretions; very strongly acid; clear wavy boundary.

Bt3—28 to 31 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; common fine and medium roots; common distinct strong brown (7.5YR 5/6) clay films on faces of peds; common fine black (10YR 2/1) iron and manganese concretions; many distinct light gray (10YR 7/1) clay depletions on faces of peds; very strongly acid; clear wavy boundary.

2Btx1—31 to 49 inches; yellowish brown (10YR 5/6) silt loam; moderate very coarse prismatic structure; very firm; few fine roots between peds; common fine vesicular pores; many prominent gray (10YR 6/1) clay films on faces of peds; brittle; few fine black (10YR 2/1) iron and manganese concretions; few prominent light gray (10YR 7/1) clay depletions on faces of peds; 2 percent channers; very strongly acid; gradual wavy boundary.

2Btx2—49 to 58 inches; brownish yellow (10YR 6/6) silt loam; weak medium and coarse subangular blocky structure; firm; few distinct yellowish brown (10YR 5/4) clay films on faces of peds; few prominent light gray (2.5Y 7/2) iron depletions in the matrix; 5 percent channers; brittle; very strongly acid; gradual wavy boundary.

2BC—58 to 64 inches; brownish yellow (10YR 6/6) channery silt loam; massive; friable; common medium prominent light gray (2.5Y 7/2) iron depletions in the matrix; 20 percent channers; extremely acid; clear wavy boundary.

2R—64 to 80 inches; fractured, very strongly cemented siltstone.

Range in Characteristics

Thickness of the loess: 20 to 40 inches
Depth to a fragipan: 20 to 36 inches
Depth to the base of the argillic horizon: 40 to 80 inches
Depth to bedrock (lithic contact): 50 to 90 inches

Figure 20.—A profile of a Spickert soil. Depth is marked in feet.

Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam
Reaction—extremely acid to neutral

A horizon (if it occurs):
Thickness—2 to 4 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3

Texture—silt loam
Reaction—extremely acid or very strongly acid

E or EB horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam
Reaction—extremely acid or very strongly acid

BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam
Reaction—extremely acid or very strongly acid; ranges to slightly acid in limed areas

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid; ranges to slightly acid in the upper part in limed areas

2Btx horizon:
Hue—10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid
Content of rock fragments—1 to 14 percent channers

2BC or 2CB horizon or 2Bt horizon (if it occurs):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 to 6
Texture—silt loam or silty clay loam or the channery or very channery analogs of these textures
Reaction—extremely acid or very strongly acid
Content of rock fragments—10 to 50 percent channers

Steff Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fluvaquentic Dystrudepts

Typical Pedon

Steff silt loam, on a slope of 1 percent in a cultivated field; 595 feet west and 65 feet north of the center of sec. 32, T. 3 N., R. 7 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 39 minutes 23 seconds N. and long. 85 degrees 46 minutes 04 seconds W., NAD 27 (UTM Zone 16, 607218 easting and 4279373 northing, NAD 83):

Ap—0 to 11 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/4) dry; weak coarse subangular blocky structure parting to moderate medium granular; friable; common very fine and fine and few medium roots; moderately acid; abrupt smooth boundary.

Bw1—11 to 23 inches; yellowish brown (10YR 5/6) silt loam; weak very coarse prismatic structure; friable; common very fine and fine roots; common distinct yellowish brown (10YR 5/4) organic coatings on faces of peds; few prominent strong brown (7.5YR 5/8) iron stains on faces of peds; common fine rounded iron and manganese concretions; common fine distinct pale brown (10YR 6/3) and few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; strongly acid; clear wavy boundary.

Bw2—23 to 41 inches; yellowish brown (10YR 5/6) silt loam; weak very coarse prismatic structure; friable; few very fine roots; few distinct yellowish brown (10YR 5/4) organic coatings on faces of peds; common distinct strong brown (7.5YR 5/8) iron stains on faces of peds; many medium prominent light brownish gray (2.5Y 6/2) iron depletions in the matrix; very strongly acid; gradual wavy boundary.

C—41 to 60 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; common faint strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common faint strong brown (7.5YR 4/6) iron stains lining pores; many medium prominent light brownish gray (2.5Y 6/2) iron depletions in the matrix; strongly acid.

Range in Characteristics

Thickness of the solum: 24 to 50 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bw or Bg horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 6
Texture—silt loam; less commonly silty clay loam
Reaction—commonly very strongly acid or strongly acid; less commonly ranges to slightly acid in the upper part

C or Cg horizon:
Hue—10YR
Value—5 or 6
Chroma—2 to 6
Texture—silt loam; strata of sandy loam or loam included below a depth of 40 inches
Reaction—very strongly acid or strongly acid

Stendal Series

Taxonomic classification: Fine-silty, mixed, active, acid, mesic Fluventic Endoaquepts

Typical Pedon

Stendal silt loam, in a nearly level area in a cultivated field; 1,400 feet north and 395 feet west of the southeast corner of sec. 29, T. 3 N., R. 7 E., Scott County, Indiana; USGS Scottsburg, Indiana, topographic quadrangle; lat. 38 degrees 40 minutes 03 seconds N. and long. 85 degrees 45 minutes 27 seconds W., NAD 27 (UTM Zone 16, 608096 easting and 4280618 northing, NAD 83):

Ap—0 to 8 inches; yellowish brown (10YR 5/4) silt loam, very pale brown (10YR 7/4) dry; weak medium subangular blocky structure parting to moderate medium granular; friable; common very fine roots; slightly acid; abrupt smooth boundary.

Bw—8 to 17 inches; light yellowish brown (10YR 6/4) silt loam; weak coarse prismatic structure; friable; common very fine roots; common distinct yellowish brown (10YR 5/4) organic coatings on faces of peds; common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; few fine rounded black (10YR 2/1) iron and manganese concretions; many medium distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; very strongly acid; gradual wavy boundary.

Bg—17 to 40 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; friable; few very fine roots; few distinct yellowish brown (10YR 5/4) organic coatings on vertical faces of peds; many medium distinct light yellowish brown (10YR 6/4) and common prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common fine rounded and few medium irregular iron and manganese concretions; very strongly acid; gradual smooth boundary.

Cg—40 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; firm; many medium prominent strong brown (7.5YR 5/8) and common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common medium irregular and few medium irregular iron and manganese concretions; very strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 24 to 48 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Thickness—1 to 3 inches
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bw or Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6

Texture—silt loam; less commonly silty clay loam
Reaction—very strongly acid or strongly acid

Cg or C horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 to 6
Texture—silt loam or silty clay loam; strata of sandy loam, loam, or fine sandy loam included below a depth of 40 inches
Reaction—very strongly acid or strongly acid

Trappist Series

Taxonomic classification: Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Trappist silt loam, on a slope of 16 percent in a forested area; 460 feet east and 1,520 feet north of the center of sec. 10, T. 4 N., R. 7 E., Scott County, Indiana; USGS Deputy, Indiana, topographic quadrangle; lat. 38 degrees 48 minutes 19 seconds N. and long. 85 degrees 43 minutes 44 seconds W., NAD 27 (UTM Zone 16, 610373 easting and 4295941 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves; abrupt smooth boundary.

A—1 to 3 inches; dark brown (10YR 3/3) silt loam, light brownish gray (10YR 6/2) dry; moderate fine and medium granular structure; friable; many fine and common coarse roots; very strongly acid; abrupt wavy boundary.

E—3 to 6 inches; light yellowish brown (10YR 6/4) silt loam; weak medium and coarse subangular blocky structure; friable; common fine and medium roots; few distinct dark grayish brown (10YR 4/2) organic coatings in root channels and pores; very strongly acid; clear wavy boundary.

Bt1—6 to 11 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium and coarse subangular blocky structure; friable; common fine and medium roots; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—11 to 22 inches; strong brown (7.5YR 5/6) silty clay; moderate medium angular blocky structure; firm; common fine and medium roots between peds; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; common distinct brownish yellow (10YR 6/6) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

Bt3—22 to 30 inches; yellowish brown (10YR 5/6) silty clay; moderate medium angular blocky structure; firm; few medium and common very fine and fine roots between peds; many distinct strong brown (7.5YR 5/6) clay films on faces of peds; many distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; very strongly acid; clear wavy boundary.

BC—30 to 35 inches; yellowish brown (10YR 5/6) very parachannery silty clay loam; many medium prominent light olive gray (5Y 6/2) and common faint strong brown (7.5YR 5/6) mottles; moderate thick platy structure parting to moderate fine angular blocky; firm; common very fine roots between peds; very strongly acid; 35 percent parachanners (shale); clear wavy boundary.

Cr—35 to 40 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent strong brown (7.5YR 5/8), weakly cemented shale; common prominent light gray (2.5Y 7/2) coatings on pararock fragments; very strongly acid; gradual wavy boundary.

R—40 to 60 inches; 60 percent very dark gray (10YR 3/1) and 40 percent yellowish brown (10YR 5/4), fractured, very strongly cemented shale.

Range in Characteristics

Thickness of the silty material: 0 to 14 inches
Depth to bedrock (lithic contact): 20 to 40 inches

A horizon:
Thickness—1 to 3 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid to neutral

E horizon (if it occurs):
Hue—10YR
Value—5 or 6
Chroma—2 to 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—silty clay loam, silty clay, parachannery silty clay loam, or parachannery silty clay
Reaction—extremely acid to strongly acid
Content of pararock fragments—0 to 30 percent parachanners (shale)

BC or CB horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—the parachannery to extremely parachannery analogs of silty clay loam or silty clay
Reaction—extremely acid to strongly acid
Content of pararock fragments—15 to 70 percent parachanners (shale)

Wakeland Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents

Typical Pedon

Wakeland silt loam, in a nearly level area in a cultivated field; 2,000 feet southwest of the east corner and then 1,000 feet northwest of the southeast boundary of donation 187, T. 4 N., R. 9 W., Knox County, Indiana; USGS Oaktown, Indiana, topographic quadrangle; lat. 38 degrees 46 minutes 48 seconds N. and long. 87 degrees 24 minutes 21 seconds W., NAD 27 (UTM Zone 16, 464751 easting and 4292227 northing, NAD 83):

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, pale brown (10YR 6/3) dry; weak medium granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

Cg1—7 to 23 inches; grayish brown (10YR 5/2) silt loam; weak medium granular structure; friable; common fine roots; many fine faint brown (10YR 5/3) masses of iron accumulation in the matrix; neutral; clear wavy boundary.

Cg2—23 to 29 inches; grayish brown (10YR 5/2) silt loam; weak fine granular structure; friable; common fine roots; common medium distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; few fine faint gray (10YR 5/1) iron depletions in the matrix; neutral; gradual wavy boundary.

Cg3—29 to 60 inches; grayish brown (10YR 5/2) silt loam; massive; friable; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid.

Range in Characteristics

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

A horizon (if it occurs):
Thickness—1 to 3 inches
Hue—10YR
Value—3 or 4
Chroma—1
Texture—silt loam
Reaction—moderately acid to neutral

C or Cg horizon:
Hue—10YR; less commonly 7.5YR or 2.5Y
Value—4 to 7
Chroma—1 to 6
Texture—silt loam; strata of loam, fine sandy loam, or sandy loam included in the lower part
Reaction—moderately acid to neutral

Weddel Series

Taxonomic classification: Fine-silty, mixed, active, mesic Fragic Oxyaquic Hapludalfs

Typical Pedon

Weddel silt loam, on a slope of 3 percent in a cultivated field; 1,790 feet west and 1,050 feet north of the southeast corner of sec. 8, T. 2 N., R. 7 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 37 minutes 23 seconds N. and long. 85 degrees 45 minutes 46 seconds W., NAD 27 (UTM Zone 16, 607703 easting and 4275680 northing, NAD 83):

Ap—0 to 8 inches; 90 percent brown (10YR 4/3) and 10 percent yellowish brown (10YR 5/6) silt loam, pale brown (10YR 6/3) and yellowish brown (10YR 5/6) dry; weak medium and coarse subangular blocky structure parting to moderate medium granular; friable; common very fine and fine roots; 2 percent gravel; strongly acid; abrupt smooth boundary.

Bt1—8 to 15 inches; yellowish brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; many distinct brown (7.5YR 5/4) clay films on faces of peds; 1 percent gravel; very strongly acid; clear smooth boundary.

Bt2—15 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots between peds; many distinct yellowish brown (10YR 5/4) clay films on faces of peds; common prominent very pale brown (10YR 7/3) silt coatings on faces of peds; 1 percent gravel; very strongly acid; clear smooth boundary.

Bt3—21 to 26 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots between peds; many prominent grayish brown (10YR 5/2) and brown (10YR 5/3) clay films on faces of peds; common distinct pale brown (10YR 6/3) silt coatings on faces of peds; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 3 percent gravel; very strongly acid; clear wavy boundary.

2Btx—26 to 39 inches; yellowish brown (10YR 5/6) silt loam; moderate medium and coarse prismatic structure parting to moderate medium subangular blocky; firm; many prominent grayish brown (10YR 5/2) and brown (10YR 5/3) clay films on vertical faces of peds; common medium irregular iron and manganese concretions; common fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 9 percent gravel; 85 percent brittle; very strongly acid; gradual wavy boundary.

3Bt1—39 to 53 inches; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; many distinct strong brown (7.5YR 4/6) and common prominent grayish brown (10YR 5/2) clay films on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 12 percent gravel; very strongly acid; gradual wavy boundary.

3Bt2—53 to 66 inches; strong brown (7.5YR 5/6) clay; moderate medium subangular blocky structure; firm; many distinct strong brown (7.5YR 4/6) and common prominent grayish brown (10YR 5/2) clay films on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions in the matrix; 14 percent gravel; very strongly acid; gradual wavy boundary.

4BC—66 to 75 inches; light olive brown (2.5Y 5/4) parachannery silty clay; weak thick platy structure parting to moderate fine angular blocky; firm; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common prominent very dark gray (N 3/) manganese stains in root channels; many fine and medium distinct light olive gray (5Y 6/2) iron depletions in the matrix; 20 percent parachanners (shale); very strongly acid; gradual wavy boundary.

4Cr—75 to 80 inches; light olive brown (2.5Y 5/4), weathered, moderately cemented shale; common fine distinct yellowish brown (10YR 5/6) mottles; fractured shale fragments $^1/_4$ to $^3/_4$ inch in thickness and 1 to 10 inches in length; very firm; many prominent light olive gray (5Y 6/2) iron depletions coating shale fragments; strongly acid.

Range in Characteristics

Thickness of the loess: 30 to 48 inches
Depth to a layer with fragic soil properties: 16 to 34 inches
Depth to the base of the argillic horizon: 50 to 75 inches
Depth to bedrock (paralithic contact): 60 to 90 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon (if it occurs):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—very strongly acid or strongly acid

Bt horizon and BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—5
Chroma—4 to 6
Texture—silt loam or silty clay loam
Reaction—very strongly acid or strongly acid; ranges to neutral in the upper part in limed areas
Content of rock fragments—1 to 3 percent gravel

2Btx horizon:
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam, silty clay loam, or clay loam
Reaction—very strongly acid
Content of rock fragments—2 to 10 percent gravel

3Bt horizon:
Hue—7.5YR or 10YR
Value—5
Chroma—4 to 8
Texture—silty clay loam, clay loam, or clay
Reaction—very strongly acid or strongly acid
Content of rock fragments—5 to 14 percent gravel

4BC horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—3 or 4
Texture—the parachannery or very parachannery analogs of silty clay loam or silty clay
Reaction—very strongly acid to moderately acid
Content of pararock fragments—15 to 50 percent parachanners (shale)

4Cr horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—3 or 4
Reaction—strongly acid or moderately acid

Wellrock Series

Taxonomic classification: Fine-silty, mixed, active, mesic Ultic Hapludalfs

Typical Pedon

Wellrock silt loam, on a slope of 12 percent in a forested area; 875 feet east and 75 feet north of the center of sec. 6, T. 8 N., R. 3 E., Brown County, Indiana; USGS Nashville, Indiana, topographic quadrangle; lat. 39 degrees 09 minutes 31 seconds N. and long. 86 degrees 14 minutes 05 seconds W., NAD 27 (UTM Zone 16, 566118 easting and 4334663 northing, NAD 83):

Oi—0 to 1 inch; roots and partially decomposed leaves from mixed deciduous trees.

A—1 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many fine and medium roots; very strongly acid; clear smooth boundary.

EB—4 to 8 inches; yellowish brown (10YR 5/4) silt loam; moderate medium granular structure; friable; many fine and medium roots; extremely acid; clear wavy boundary.

Bt1—8 to 20 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium subangular blocky structure; firm; common fine and medium roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; very strongly acid; clear smooth boundary.

Bt2—20 to 28 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; firm; common fine and medium roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; very strongly acid; clear smooth boundary.

2Bt3—28 to 36 inches; yellowish brown (10YR 5/6) silty clay loam; moderate coarse prismatic structure parting to moderate medium angular blocky; firm; few fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; common pale brown (10YR 6/3) silt coatings on faces of peds; 3 percent parachanners; extremely acid; clear wavy boundary.

2Bt4—36 to 52 inches; yellowish brown (10YR 5/4) extremely parachannery silt loam; common medium distinct light brownish gray (2.5Y 6/2) mottles; weak fine subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; 60 percent parachanners; very strongly acid; clear smooth boundary.

2Cr—52 to 60 inches; yellowish brown (10YR 5/4), fractured, moderately cemented siltstone interbedded with thin layers of weakly cemented shale and very strongly cemented siltstone.

Range in Characteristics

Thickness of the loess: 22 to 38 inches
Depth to the base of the argillic horizon: 38 to 58 inches
Depth to bedrock (paralithic contact): 40 to 60 inches

A horizon:
Thickness—1 to 5 inches
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam
Reaction—very strongly acid or strongly acid

Ap horizon (if it occurs):
Hue—10YR
Value—4 or 5

Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

EB, BE, or E/A horizon:
Hue—10YR
Value—5 or 6
Chroma—4 to 6
Texture—silt loam
Reaction—extremely acid or very strongly acid; ranges to slightly acid in limed areas

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

2Bt or 2BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—silt loam or silty clay loam or the parachannery to extremely parachannery analogs of these textures
Reaction—extremely acid or very strongly acid
Content of pararock fragments—10 to 65 percent parachanners

2Cr horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6

Whitcomb Series

Taxonomic classification: Fine-silty, mixed, active, mesic Aeric Paleaquults

Typical Pedon

Whitcomb silt loam, on a slope of 1 percent in a pasture; 210 feet east and 180 feet south of the center of sec. 30, T. 4 N., R. 7 E., Scott County, Indiana; USGS Crothersville, Indiana, topographic quadrangle; lat. 38 degrees 45 minutes 26 seconds N. and long. 85 degrees 47 minutes 06 seconds W., NAD 27 (UTM Zone 16, 605571 easting and 42905442 northing, NAD 83):

A—0 to 2 inches; brown (10YR 4/3) silt loam, very pale brown (10YR 7/3) dry; moderate fine granular structure; friable; many very fine and fine roots; moderately acid; abrupt smooth boundary.

Ap—2 to 9 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; moderate medium granular structure; friable; common very fine and fine roots; common fine faint light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common medium irregular iron and manganese concretions; 1 percent gravel; moderately acid; abrupt smooth boundary.

BE—9 to 15 inches; light yellowish brown (10YR 6/4) silt loam; weak fine subangular blocky structure; friable; common very fine roots; common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; common fine irregular iron and manganese concretions; common medium distinct light gray

(10YR 7/2) iron depletions in the matrix; 1 percent gravel; extremely acid; clear wavy boundary.

Btg1—15 to 22 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots between peds; many distinct light brownish gray (10YR 6/2) clay films on faces of peds; many medium distinct light yellowish brown (10YR 6/4) and common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine irregular iron and manganese concretions; 1 percent gravel; extremely acid; clear wavy boundary.

Btg2—22 to 30 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots between peds; many distinct gray (10YR 6/1) clay films on faces of peds; many medium prominent strong brown (7.5YR 5/8) and common distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; common medium irregular iron and manganese concretions; 1 percent gravel; extremely acid; gradual wavy boundary.

2Btgx1—30 to 37 inches; gray (10YR 6/1) silty clay loam; moderate coarse prismatic structure parting to moderate coarse subangular blocky; firm; many distinct gray (10YR 6/1 and 5/1) clay films on faces of peds; few prominent very dark gray (N 3/) manganese stains on faces of peds and in pores; many medium prominent strong brown (7.5YR 5/8) and few distinct light yellowish brown (10YR 6/4) masses of iron accumulation in the matrix; 2 percent gravel; 40 percent brittle; extremely acid; clear wavy boundary.

2Btgx2—37 to 48 inches; gray (10YR 6/1) silty clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; firm; common prominent gray (10YR 5/1) clay films on faces of peds; few prominent very dark gray (N 3/) manganese stains on faces of peds and in pores; many coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 2 percent gravel; 50 percent brittle; extremely acid; gradual wavy boundary.

3Btg—48 to 56 inches; gray (10YR 6/1) silty clay; weak medium subangular blocky structure; firm; few prominent gray (10YR 5/1) clay films on faces of peds; many coarse prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 2 percent gravel; extremely acid; clear wavy boundary.

3BCg—56 to 61 inches; 60 percent light brownish gray (10YR 6/2) and 30 percent pinkish gray (7.5YR 6/2) very parachannery silty clay loam; moderate thick platy structure; firm; many medium distinct brown (7.5YR 4/4) and few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 40 percent parachanners (shale); extremely acid; abrupt wavy boundary.

3R—61 to 80 inches; very dark gray (10YR 3/1), very strongly cemented, fissile shale.

Range in Characteristics

Thickness of the loess: 24 to 40 inches
Depth to a layer with fragic soil properties: 24 to 36 inches
Depth to the base of the argillic horizon: 48 to 65 inches
Depth to bedrock (lithic contact): 60 to 80 inches

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid to neutral

A horizon:
Thickness—0 to 4 inches
Hue—10YR
Value—3 or 4
Chroma—3 or 4
Texture—silt loam
Reaction—very strongly acid or strongly acid

BE horizon:
Hue—10YR
Value—6
Chroma—3 to 6
Texture—silt loam
Reaction—extremely acid or very strongly acid

Btg horizon:
Hue—10YR
Value—6 or 7
Chroma—1 or 2
Texture—silt loam or silty clay loam
Reaction—extremely acid or very strongly acid

2Btgx horizon:
Hue—10YR
Value—5 to 7
Chroma—1 or 2
Texture—silty clay loam
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 to 3 percent gravel

3Btg horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam or silty clay
Reaction—extremely acid or very strongly acid
Content of rock fragments—1 to 3 percent gravel

3BCg horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 or 2
Texture—the parachannery to extremely parachannery analogs of silty clay loam or silty clay
Reaction—extremely acid or very strongly acid
Content of pararock fragments—15 to 60 parachanners

Wilbur Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Fluvaquentic Eutrudepts

Typical Pedon

Wilbur silt loam, in a nearly level area in a cultivated field; 2,245 feet north and 1,450 feet east of the southwest corner of donation 99, T. 1 S., R. 10 W., Gibson County,

Indiana; USGS Patoka, Indiana, topographic quadrangle; lat. 38 degrees 24 minutes 46 seconds N. and long. 87 degrees 34 minutes 10 seconds W., NAD 27 (UTM Zone 16, 450283 easting and 4251774 northing, NAD 83):

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; neutral; clear smooth boundary.

Bw1—7 to 17 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; friable; few fine roots; few fine faint brown (10YR 5/3) iron depletions in the matrix; neutral; gradual smooth boundary.

Bw2—17 to 32 inches; brown (10YR 5/3) silt loam; weak medium subangular blocky structure; friable; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

Cg—32 to 60 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; many fine distinct brown (7.5YR 4/4) and common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 24 to 42 inches

Ap or A horizon:
Hue—10YR
Value—4
Chroma—2 to 4
Texture—silt loam
Reaction—moderately acid to neutral

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam
Reaction—moderately acid to neutral

C or Cg horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam; loam and thin strata of fine sandy loam or sandy loam included in the lower part
Reaction—moderately acid to neutral

Wirt Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Wirt loam, in a nearly level area in a pasture; 50 feet south and 2,085 feet east of the northwest corner of sec. 24, T. 3 N., R. 8 E., Jefferson County, Indiana; USGS Kent, Indiana, topographic quadrangle; lat. 38 degrees 41 minutes 35 seconds N. and long. 85 degrees 34 minutes 57 seconds W., NAD 27 (UTM Zone 16, 623277 easting and 4283675 northing, NAD 83):

Ap—0 to 8 inches; brown (10YR 4/3) loam, pale brown (10YR 6/3) dry; moderate medium granular structure; weak thin platy structure in the lower part; friable; many fine roots; neutral; clear smooth boundary.

Bw1—8 to 15 inches; brown (10YR 4/3) silt loam; common fine distinct light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; friable; common fine roots; few distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; gradual smooth boundary.

Bw2—15 to 22 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; gradual wavy boundary.

Bw3—22 to 38 inches; dark yellowish brown (10YR 4/6) loam; few fine distinct light yellowish brown (10YR 6/4) mottles; moderate medium subangular blocky structure; friable; many distinct dark brown (10YR 3/3) organic coatings on faces of peds; neutral; gradual wavy boundary.

C1—38 to 50 inches; dark yellowish brown (10YR 4/6) sandy loam; common fine distinct pale brown (10YR 6/3) mottles; massive; friable; 1 percent gravel; neutral; gradual wavy boundary.

C2—50 to 60 inches; dark yellowish brown (10YR 4/4) gravelly sandy loam; massive; friable; 25 percent gravel; neutral.

Range in Characteristics

Depth to the base of the cambic horizon: 24 to 48 inches

Ap horizon:

Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam or loam
Reaction—moderately acid to neutral

A horizon (if it occurs):

Thickness—2 to 6 inches
Hue—10YR
Value—2 to 4
Chroma—2 or 3
Texture—silt loam or loam
Reaction—moderately acid to neutral

Bw horizon:

Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture—silt loam, loam, fine sandy loam, sandy loam, or very fine sandy loam
Reaction—moderately acid to neutral
Content of rock fragments—0 to 14 percent gravel

C horizon or BC horizon (if it occurs):

Hue—10YR
Value—3 to 5
Chroma—3 to 6
Texture—loam, fine sandy loam, or sandy loam; the gravelly analogs of these textures and strata of loamy fine sand, loamy sand, gravelly loamy fine sand, or gravelly loamy sand included below a depth of 40 inches

Reaction—moderately acid to neutral
Content of rock fragments—0 to 34 percent gravel

Wrays Series

Taxonomic classification: Fine-silty, mixed, active, mesic Typic Hapludults

Typical Pedon

Wrays silt loam, on a northwest-facing slope of 13 percent in a forested area; 850 feet east and 1,900 feet north of the southwest corner of sec. 35, T. 2 N., R. 6 E., Scott County, Indiana; USGS Henryville, Indiana, topographic quadrangle; lat. 38 degrees 33 minutes 59 seconds N. and long. 85 degrees 49 minutes 28 seconds W., NAD 27 (UTM Zone 16, 602415 easting and 4269321 northing, NAD 83):

Oi—0 to 1 inch; partially decomposed leaves from mixed deciduous trees.
E/A—1 to 6 inches; 85 percent light yellowish brown (10YR 6/4) (E) and 15 percent dark grayish brown (10YR 4/2) (A) silt loam, very pale brown (10YR 8/4) and light brownish gray (10YR 6/2) dry; weak fine and medium subangular blocky structure parting to moderate medium granular; friable; many very fine and fine, common medium and coarse, and few very coarse roots; very strongly acid; gradual wavy boundary.
Bt1—6 to 12 inches; strong brown (7.5YR 5/6) silt loam; weak fine and medium subangular blocky structure; friable; common very fine and fine, common medium and coarse, and few very coarse roots throughout; few distinct strong brown (7.5YR 5/6) clay films on faces of peds; very strongly acid; clear wavy boundary.
Bt2—12 to 25 inches; strong brown (7.5YR 5/6) silty clay loam; moderate fine and medium subangular blocky structure; firm; few very fine and fine and common medium and coarse roots between peds and few very coarse roots throughout; many distinct strong brown (7.5YR 4/6) clay films on faces of peds; very strongly acid; gradual wavy boundary.
2Bt3—25 to 34 inches; yellowish brown (10YR 5/6) silty clay loam; weak medium subangular blocky structure; friable; few very fine and fine roots and common medium roots between peds; many prominent strong brown (7.5YR 5/6) and common distinct pale brown (10YR 6/3) clay films on faces of peds; 10 percent channers; very strongly acid; clear wavy boundary.
2CB—34 to 44 inches; light yellowish brown (2.5Y 6/4) extremely channery silt loam; moderate very thick platy structure; firm; few very fine and fine roots between peds; common distinct light brownish gray (2.5Y 6/2) clay films on rock fragments; common prominent strong brown (7.5YR 4/6) iron stains on faces of peds; 65 percent channers; very strongly acid; clear wavy boundary.
2R—44 to 60 inches; fractured, very strongly cemented siltstone.

Range in Characteristics

Thickness of the loess: 22 to 36 inches
Depth to the base of the argillic horizon: 30 to 50 inches
Depth to bedrock (lithic contact): 40 to 60 inches

E/A horizon:
Hue—10YR
Value—3 or 4 (A); 5 or 6 (E)
Chroma—2 or 3 (A); 4 to 6 (E)
Texture—silt loam
Reaction—very strongly acid or strongly acid

Ap horizon (if it occurs):
- Hue—10YR
- Value—4 or 5
- Chroma—3 or 4
- Texture—silt loam
- Reaction—very strongly acid to neutral

Bt horizon:
- Hue—7.5YR or 10YR
- Value—4 to 6
- Chroma—4 to 8
- Texture—silt loam or silty clay loam
- Reaction—very strongly acid or strongly acid; ranges to slightly acid in the upper part in limed areas

2Bt horizon:
- Hue—7.5YR or 10YR
- Value—4 to 6
- Chroma—4 to 8
- Texture—silt loam, silty clay loam, channery silt loam, or channery silty clay loam
- Reaction—extremely acid or very strongly acid
- Content of rock fragments—2 to 25 percent channers

2CB or 2BC horizon:
- Hue—7.5YR to 2.5Y
- Value—4 to 6
- Chroma—4 to 8
- Texture—the channery to extremely channery analogs of silt loam or silty clay loam
- Reaction—extremely acid or very strongly acid
- Content of rock fragments—20 to 65 percent channers

Formation of the Soils

This section relates the major factors of soil formation to the soils in Clark County. The processes of soil formation also are described.

Factors of Soil Formation

Soils form through processes acting upon deposits of plant and geologic materials. The characteristics of a soil at any given point are determined by five major factors: (1) time—the period during which the soil-forming factors have acted upon the parent material; (2) parent material—the physical and mineralogical composition of the plant and geologic materials; (3) topography—the general configuration of the land's surface; (4) climate—the temperature and moisture conditions under which the soils formed; and (5) organisms—the plant and animal life on and in the soil (Jenny, 1994).

Parent material greatly affects the development of the soil. Climate and organisms are active factors of soil formation. They act upon the parent material through the weathering process and slowly change it into a natural body with genetically related horizons. The effects of climate and organisms are conditioned by the topography of the area. Finally, time is needed for the transformation of the parent material into a soil exhibiting horizonation.

The factors of soil formation are so closely interrelated in their effects on the soil and on each other that few generalizations can be made regarding the effects of any one factor unless conditions are specified for the others.

Time

Generally, a long time is needed for the development of distinct soil horizons. The length of time that parent material has been in place commonly reflects the degree of profile development.

The soils in Clark County range from immature to mature. Avonburg, Cincinnati, Nabb, and other soils that formed in loess and till and Crider, Haggatt, and Spickert soils that formed in loess over material weathered from bedrock have been exposed to the soil-forming factors long enough for the development of distinct horizons. Haymond, Wakeland, and other soils that formed in recent alluvium, however, have not been in place long enough for this kind of development. Some steep soils, such as Brownstown soils, have been exposed to the soil-forming factors for a long time but do not have distinct horizons. Most of the precipitation that has fallen on these soils has run off the surface and thus has not moved through the profile; consequently, very little weathering of minerals or translocation of soil material has occurred.

Parent Material

Dr. Stanley M. Totten, professor of geology, Hanover College, helped prepare this section.

The soils in Clark County formed in a variety of parent materials associated with many landforms. Generally, the soils formed in unconsolidated gravel, sand, silt, and clay deposited by glaciers, streams, and wind, or they formed in material weathered

from shale, siltstone, or limestone bedrock. The unconsolidated surficial materials range from 0 to more than 30 feet in thickness. Thus, bedrock is sufficiently close to the surface to exert influence on soil formation over extensive areas of the county. In many soils the upper part of the profile has formed in a different kind of material than the lower part, and many soils have formed in two or three kinds of parent material.

The bedrock exposed in Clark County belongs to the Ordovician, Silurian, Devonian, and Mississippian Systems of the Paleozoic Era and ranges in age from about 350 to 450 million years. These rocks consist of shale, siltstone, and limestone, which originated as fine grained sediments in warm, shallow marine waters that covered much of the North American continent. All bedrock units dip gently westward away from the Cincinnati Arch and toward the Illinois Basin at 20 to 25 feet per mile. As a result, rock units become successively younger in a westward direction in Clark County. The relatively old Saluda and Dillsboro limestone and shale formations of Ordovician age occur in the extreme eastern part of the county, whereas the relatively young St. Louis and Salem Formations of Mississippian age occur in the most western part of the county.

Differential erosion of the dipping rocks has resulted in the development of four physiographic provinces (Gray, 2001). The Muscatatuck Plateau is in the eastern part of the county; the Charlestown Hills, which developed in the more easily eroded shales of the New Albany and New Providence Formations, is in the central part of the county; the Norman Upland, which consists of higher elevations and steeper slopes and developed in the more resistant and massive siltstones of the Spickert Knob Formation, is in the western part of the county; and the Mitchell Plateau is in the extreme western part of the county. Separating the Norman Upland from the Charlestown Hills is the Knobstone Escarpment, the most prominent topographic feature in Indiana, which has an average height of about 375 feet in the county. Elevations in Clark County range from a low of about 390 feet at the junction of the Ohio River and Silver Creek to a high of about 1,020 feet in the knobs about 3/4 mile southwest of Bennettsville (fig. 21).

Ordovician rocks occur in the easternmost part of the county, mainly along the lower part of the steep slopes adjacent to the Ohio River. Silurian and Devonian rocks occur in a north-south-trending belt in the central part of the county. Mississippian rocks, siltstone, shale, and limestone occur in the western part of the county.

The Dillsboro Formation of the Ordovician System consists of gray, calcareous shale and thin fossiliferous limestone interbeds. Eden soils formed in the clayey material weathered from this formation.

The Laurel and Louisville Formations of the Silurian System and the Geneva, Jeffersonville, and North Vernon Formations of the Devonian System are similar to each other. They consist of varying amounts of dolomite and argillaceous limestone. They underlie karst and rolling uplands in the east-central and southeastern parts of the county. Thin loess and glacial drift of variable thickness overlie these limestone formations in the eastern part of the county, and Ryker and Grayford soils formed in these materials. Some of these soils are mapped as “karst” phases.

In areas where the glacial drift was not deposited, Crider and Haggatt soils formed in thin loess and the underlying reddish clayey residuum. Some of the Caneyville soils also formed in clayey residuum from these limestones. These soils associated with the Silurian and Devonian limestones are mainly in the southeastern part of Clark County. Some of these soils are mapped as “karst” phases.

The New Albany shale, of the Devonian System, occurs in the central part of the county. It consists of five closely related members. From oldest to youngest, these are the Blocher, Selmier, Morgan Trail, Camp Run, and Clegg Creek members. They differ slightly in color and weathering characteristics (Lineback, 1970). The Blocher, Morgan Trail, and Clegg Creek members are dominated by brownish black, hard, brittle shale that contains much carbonaceous matter. Trappist, Rohan, and Jessietown soils

Figure 21.—View overlooking the Muddy Fork of Silver Creek Valley. Haymond and Wilbur soils are on the flood plains, and the Spickert Knob and New Providence shales and siltstones are on the hillslopes.

formed in residuum from these members. Scottsburg and Whitcomb soils occur in places where most of the residuum has been removed by the glaciers, and these soils formed in a thin mantle of loess, pedisediment, and a thin layer of residuum derived from these members. The Selmier and Camp Run members consist of weakly resistant greenish gray and brownish black shale and mudstone. Deputy soils formed in thin loess-covered clayey residuum derived from these members. Jennings soils formed in places where residuum of all the members is covered with a thin mantle of loess and till.

The Rockford Formation of Mississippian age consists of a thin bed of limestone, which serves as a marker bed between the brownish black New Albany shale below and the greenish gray New Providence shale above. This formation has insufficient thickness or extent to be the parent material of any of the soils in the county.

The New Providence Formation of Mississippian age consists of greenish gray shale that occurs at the base of the Knobstone Escarpment in the western part of Clark County. The soft shales of this unit and of the overlying units that crop out in the escarpment are frequently referred to as “soapstone” because of a slippery or slick feel resulting from mica and a high clay content. Deam soils formed in clayey residuum derived from this shale. Also, some of the Coolville and Rarden soils formed in thin loess over clayey residuum derived from this formation (fig. 22). In areas where the glacier left a thin deposit of till, Weddel soils formed in a thin mantle of loess, till, and the underlying clayey residuum.

The prominent Knobstone Escarpment, about 375 feet high, is a highly dissected, one-sided ridge facing east. It marks the boundary between the Charlestown Hills on the east-northeast and the Norman Upland on the west-southwest. This escarpment in western Clark County is composed of a chain of steep, highly eroded hillslopes and ravines in which gray to drab siltstone of the Spickert Knob Formation (Rexroad and Lane, 1984) crops out in places. On the lower part of the escarpment, the Spickert Knob Formation is composed of gray to drab shaly siltstone formerly known as the Locust Point Formation. Kurtz and Gnawbone soils formed in residuum derived from

Figure 22.—A recreational pond in an area of Coolville, Rarden, and Deam soils that formed in greenish gray shale.

the shaly siltstone. The lower part of the solum in some of the Coolville and Rarden soils also formed in this material. The upper part of the escarpment, at elevations generally exceeding 800 feet, is composed of massive gray siltstone of the upper part of the Spickert Knob Formation, formerly known as the Carwood Formation. Brownstown and Gilwood soils formed in the silty residuum of this unit.

In the extreme western part of Clark County is an area underlain with limestone of the Harrodsburg, Salem, and St. Louis Formations of Mississippian age. This limestone is the youngest bedrock in the county. Bedford, Caneyville, Crider, Knobcreek, and Navilleton soils formed in thin or very thin loess and a reddish, clayey residuum generally known as “terra rossa” (Ruhe and Olson, 1980). This residuum is primarily made up of clay, iron oxide, and chert and other materials. Limestone bedrock crops out at the surface or is at a depth of more than 15 feet (fig. 23). In the southwestern part of the county, a small part the landscape is characterized by karst topography. Some of the Caneyville, Knobcreek, and Navilleton soils in this area are mapped as “karst” phases.

A period of broad uplift, erosion, and weathering lasting about 340 million years followed the deposition of the shale, siltstone, and limestone bedrock.

Clark County was covered by continental ice sheets at least twice and probably several times during the Illinoian and pre-Illinoian glacial stages. These glaciers, although thin and near the southernmost limit of their advances, managed to flow over and above the Knobstone Escarpment to cover the entire county with ice. These large ice sheets modified the pre-glacial topography of Clark County only slightly, but the deposits left behind, in the form of till, outwash, lacustrine material, and loess, greatly influenced subsequent soil formation.

From about 150,000 to 130,000 years ago, Indiana was invaded by the Illinoian continental ice sheet, which covered much of the eastern part of Clark County. The ice

sheet deposited a thin layer of till. The thickness of the till was only a few feet in most places but ranged to as much as 30 feet. The till is discontinuous and is absent on the steeper hillslopes where post-glacial sheetwash and gully erosion have removed the weak unconsolidated materials.

During and immediately after the retreat phase of Illinoian ice, “gritty” loess (USDA, 1990), a silty sediment picked up by the wind from meltwater flood plains, was deposited in the survey area.

Avonburg, Cincinnati, Nabb, and Cobbsfork soils formed in materials consisting of, from the surface downward, silty loess, “gritty” loess, and Illinoian till. On the strongly sloping to steep slopes, Bonnell and Hickory soils formed in less than 20 inches of loess and in the Illinoian till.

The oldest glacial drift in the county consists of red outwash, the product of a pre-Illinoian ice advance that occurred at least 250,000 years ago, perhaps considerably earlier. This pre-Illinoian deposit consists primarily of stratified red sand and gravel in

Figure 23.—Variability in depth to limestone.

the form of short, low linear ridges concentrated in the north-central part of the county. These ridges are interpreted as crevasse fillings that formed when meltwaters washed debris from near the terminus of a stagnant ice sheet into depressions in the ice. After retreat of the pre-Illinoian ice sheet, a period of warmer climate similar to the present climate occurred, during which a paleosol developed in the red drift. Medora soils formed in 2 to 3 feet of silty loess and in the underlying paleosol that formed in the red outwash.

The period from 125,000 to 70,000 years before present was an interglacial period characterized by weathering, erosion, and soil formation. Ice sheets formed about 70,000 years before present in Canada but did not reach Indiana until about 24,000 years ago. This Wisconsinan ice advance halted about 50 miles north of Clark County. Melting of the ice sheet caused the discharge of large quantities of meltwater into the Ohio River valley and deposited sand and gravel outwash. Elkinsville and Millstone soils formed in loamy sediments and are typically underlain with sand and gravel at a depth of more than 6 feet. This outwash dammed the Ohio River tributaries and formed temporary lakes in the lower valley of Silver Creek, Fourteen Mile Creek, Bull Creek, and Camp Creek. The lake level rose to an elevation of at least 470 feet as evidenced by lake sediments at this elevation and below. Sediments consisting of silty clay and clayey silt as much as 30 feet thick were deposited in the lake. Markland, McGary, and Shircliff soils formed in lacustrine (lake) sediments and the overlying 1.5 feet or less of silty loess. These lacustrine sediments are dominantly clayey in the upper part and are dominantly silty and clayey in the lower part.

Melting of Wisconsinan ice between about 20,000 and 15,000 years ago in central Indiana resulted in the deposition of 2 to 3 feet of silty loess in Clark County. As with the older "gritty" loess of probable Illinoian age, much of the silty loess later was reworked or removed by slope processes, lake water, and streams. Weathering, sheetwash, gullying, and stream action have continued to modify parts of the Clark County landscape up to the present.

Several cycles of stream erosion involving lateral planation of valleys are evident in Clark County. Modification of all pre-glacial valleys in the county occurred during and after each glacial stage, and some valleys were partially filled with till, alluvium, or lake sediment. Stream terraces, the flat remnants of former flood plains, occur in places along the margins of most valleys at elevations ranging from 6 to 20 feet above the modern flood plain. The stream terraces along Muddy Fork, Silver Creek, and Sinking Fork typically are 6 to 20 feet above their modern flood plains. These terraces are underlain by silty or loamy, acid alluvium and are capped by 2 to 3 feet of silty loess of late Wisconsinan age. Bartle, Pekin, and Peoga soils formed in these loess-capped alluvial materials.

The stream terraces along the Ohio River typically are 10 to 30 feet above their modern flood plains. These silty or loamy terraces, which formed in sediments from the Wisconsinan ice advance, are underlain by loamy and sandy alluvium. Elkinsville, Hatfield, and Millstone soils formed in these alluvial materials.

Alluvium was deposited on the flood plains during, between, and after the periods of glaciation. The composition of the alluvium on the modern flood plains in Clark County varies, depending on the source of the alluvium, time of deposition, proximity in the valley, and overflow velocity of the water carrying the alluvial sediment. Most of the alluvial sediment deposited on the flood plains in the county is silty or loamy and ranges from neutral to very strongly acid. Bonnie, Cuba, Steff, and Stendal soils formed in acid, silty sediment and are mainly in the Muddy Fork and Silver Creek stream valleys. Haymond, Wakeland, and Wilbur soils formed in moderately acid to neutral, silty sediment and occur mainly in the valleys of Fourteen Mile, Muddy Fork, and Silver Creeks and their tributaries. Huntington, Lindside, and Newark soils formed in slightly acid or neutral, silty sediment and are mainly in the Ohio River valley. Beanblossom soils, in narrow tributaries, formed in loamy sediment over very

channery sediment washed from hillslopes in the siltstone bedrock of the Norman Upland.

Topography

Topography, or relief, has markedly influenced the soils in Clark County through its effect on natural drainage, erosion, runoff, plant cover, and soil temperature. Some soils formed in the same kind of parent material but differ mainly in drainage characteristics because of relief.

Runoff is most rapid on the steepest slopes. Many low, depressional areas are temporarily ponded. The greater the runoff rate, the greater the hazard of erosion.

Through its effect on aeration in the soil, drainage determines the major color of a soil. Water and air move freely through most well drained soils and slowly through very poorly drained soils. In Crider, Elkinsville, and other soils that are well aerated, the iron and aluminum compounds that give most soils their color are reddish or brownish and are oxidized. Bonnie, Cobbsfork, and other poorly aerated soils that are saturated for long periods commonly are dominantly gray with reddish and brownish masses of iron accumulation. The soils are gray because the iron compounds are in a reduced state or have been removed from the profile.

Soils on west- and south-facing slopes generally are warmer than soils on north- and east-facing slopes.

Climate

Climate largely determines the kind of plant and animal life on and in the soil. It also determines the amount of water available for the weathering of minerals and the translocation of soil material. Temperature determines the rate of chemical reactions in the soil. These effects tend to be uniform in relatively small areas, such as those the size of a county.

The climate in Clark County is generally cool and moist in winter and hot and humid in summer. It is presumably similar to the one that prevailed when the soils formed. The climate is nearly uniform throughout the county, and thus differences among the soils in the county are not the result of varied climatic conditions.

Organisms

Plants have been the principal organisms influencing the soils in Clark County, but bacteria, fungi, earthworms, and human activities also have been important. The chief contribution of plant and animal life is the addition of organic matter and nitrogen to the soil. The kind of organic material in and on the soil depends on the kind of native plants that grew on the soil. The remains of these plants accumulated in the surface layer, decayed, and eventually became humus. The roots of the plants provided channels for the downward movement of water and air through the soil, and they added organic matter as they decayed. Bacteria in the soil help to break down the organic matter into plant nutrients.

The native vegetation in Clark County was mainly deciduous, mixed hardwoods. Differences in natural soil drainage and minor variations in the parent material affected the composition of the forest species. Common trees on well drained soils, such as Gilwood and Brownstown soils, were yellow-poplar, white oak, red oak, hickory, elm, and sugar maple. Wet soils, such as Cobbsfork and Peoga soils, supported primarily sweetgum, pin oak, beech, and soft maple.

Processes of Soil Formation

Several processes have been involved in the formation of the soils in Clark County. These processes are the accumulation of organic matter; the dissolution, transfer, and removal of calcium carbonates and bases; the liberation and translocation of silicate clay minerals; and the reduction and transfer of iron. In most of the soils, more than one of these processes have helped to differentiate soil horizons.

Some organic matter has accumulated in the surface layer of all of the soils in the county. The organic matter content of most of the soils is low or moderately low.

Carbonates and bases have been leached from the upper horizons of most of the soils in the county. Leaching probably preceded the translocation of silicate clay minerals. Almost all of the carbonates and some of the bases have been leached from the A and B horizons of the well drained soils. Even in the wettest soils, some leaching is indicated by the absence of carbonates and by an acid soil reaction. Leaching of wet soils is slow because of a seasonal high water table or the slow movement of water through the profile.

Clay accumulates in pores and other voids and forms films on the surfaces along which water moves. The leaching of bases and the translocation of silicate clays are among the more important processes affecting horizon differentiation in the soils. Spickert soils are examples of soils in which translocated silicate clays have accumulated in the Bt horizon in the form of clay films. Gleying, or the reduction and transfer of iron, has occurred in all of the very poorly drained to somewhat poorly drained soils in the county. In these naturally wet soils, this process has had a significant effect on horizon differentiation. A gray subsoil indicates the reduction of iron oxides. This reduction is commonly accompanied by some transfer of the iron from the upper horizons to the lower ones or completely out of the profile. The redoximorphic concentrations in some horizons indicate the segregation of iron. Cobbsfork soils are examples of soils in which this process has occurred.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the

lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed; the adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. See Terracettes.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression. Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage. An open depression has a natural outlet for surface drainage.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Drift. A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified

material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Earthy fill. See Mine spoil.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Esker. A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.
Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.
Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.
Fine textured soil. Sandy clay, silty clay, or clay.
Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.
First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.
Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.
Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.
Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.
Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.
Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.
Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.
Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.
Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).
Forb. Any herbaceous plant not a grass or a sedge.
Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.
Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.
Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.
Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphology. The science that treats the general configuration of the earth's surface; specifically the study of the classification, description, nature, origin, and development of landforms and their relationships to underlying structures and the history of geologic changes as recorded by these surface features. The term is especially applied to the genetic interpretation of landforms.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Herbaceous peat. An accumulation of organic material, decomposed to some degree, that is predominantly the remains of sedges, reeds, cattails, and other herbaceous plants.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a

well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Ice-walled lake plain. A relict surface marking the floor of an extinct lake basin that was formed on solid ground and surrounded by stagnant ice in a stable or unstable superglacial environment on stagnation moraines. As the ice melted, the lake plain became perched above the adjacent landscape. The lake plain is well sorted, generally fine textured, stratified deposits.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Ksat. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake bed. The bottom of a lake; a lake basin.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Lamella. A thin (commonly less than 1 cm thick), discontinuous or continuous, generally horizontal layer of fine material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated within a coarser textured eluviated layer several centimeters to several decimeters thick).

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly. (See Slippage.)

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates

less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat. Unconsolidated soil material consisting primarily of organic material that is in an intermediate stage of decomposition such that a significant part of the material can be recognized and a significant part of the material cannot be recognized.

Mudstone. A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash. Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleosol. A soil that formed on a landscape in the past with distinct morphological features resulting from a soil-forming environment that no longer exists at the site. The former pedogenic process was either altered because of external environmental change or interrupted by burial. A paleosol (or component horizon) may be classed as relict if it persisted in a land-surface position without major alteration of morphology by processes of the pedogenic environment. An exhumed paleosol is one that formerly was buried and has been re-exposed by erosion of the covering mantle. Most paleosols have been affected by subsequent modification of diagnostic horizon morphologies and profile truncation.

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.
Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.
Pararock fragments. Fragments of paralithic materials, having a diameter of 2 millimeters or more; for example, parachanners and paraflagstones.
Parent material. The unconsolidated organic and mineral material in which soil forms.
Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)
Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.
Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.
Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.
Percolation. The movement of water through the soil.
Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)
Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.
Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.
Plastic limit. The moisture content at which a soil changes from semisolid to plastic.
Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.
Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.
Plowpan. A compacted layer formed in the soil directly below the plowed layer.
Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers

that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slippage. A mass movement of soil that happens when the vegetation is removed and soil water is at or near saturation or when the slope is undercut.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a

slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level	0 to 1 percent
Nearly level	0 to 3 percent
Very gently sloping	1 to 3 percent
Gently sloping	2 to 6 percent
Moderately sloping	6 to 12 percent
Strongly sloping	12 to 18 percent
Moderately steep	18 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Classes for complex slopes are as follows:

Level	0 to 1 percent
Nearly level	0 to 3 percent
Gently undulating	1 to 4 percent
Undulating	1 to 8 percent
Gently rolling	4 to 10 percent
Rolling	4 to 16 percent
Hilly	10 to 30 percent
Steep	20 to 60 percent
Very steep	45 percent and higher

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons.

Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Swale. A slight depression in the midst of generally level land. A shallow depression in an undulating ground moraine caused by uneven glacial deposition.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine. An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till. Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain. An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers

seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Woody peat. An accumulation of organic material that is predominantly composed of trees, shrubs, and other woody plants.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-90 at Salem, Indiana)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	39.0	20.7	29.9	65	-14	41	2.95	1.38	4.29	5	6.1
February---	43.7	23.1	33.4	70	-10	58	2.96	1.26	4.41	6	6.0
March------	55.6	33.5	44.5	80	7	217	4.86	2.59	6.85	8	3.4
April------	66.9	42.7	54.8	85	22	450	4.33	2.40	6.04	8	.3
May--------	75.7	51.3	63.5	90	31	729	4.71	2.66	6.53	8	.0
June-------	84.3	60.3	72.3	95	42	969	3.68	1.93	5.22	6	.0
July-------	86.9	64.2	75.6	98	48	1,103	5.04	3.07	6.81	7	.0
August-----	85.7	62.0	73.8	97	46	1,049	3.34	1.92	4.61	5	.0
September--	80.1	55.8	67.9	93	35	838	2.83	1.55	3.96	5	.0
October----	68.8	43.9	56.4	86	22	510	3.01	1.42	4.37	5	.1
November---	55.5	35.6	45.6	77	13	219	3.88	2.29	5.31	7	1.1
December---	43.7	26.2	34.9	68	-3	78	3.69	2.17	5.04	7	2.8
Yearly:											
Average---	65.5	43.3	54.4	---	---	---	---	---	---	---	---
Extreme---	103	-25	---	99	-15	---	---	---	---	---	---
Total-----	---	---	---	---	---	6,261	45.28	37.63	50.31	77	19.8

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Salem, Indiana)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 11	Apr. 28	May 12
2 years in 10 later than--	Apr. 6	Apr. 23	May 6
5 years in 10 later than--	Mar. 28	Apr. 13	Apr. 25
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 20	Oct. 8	Sept. 30
2 years in 10 earlier than--	Oct. 24	Oct. 13	Oct. 4
5 years in 10 earlier than--	Nov. 2	Oct. 24	Oct. 11

Table 3.--Growing Season

(Recorded in the period 1961-90 at Salem, Indiana)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	198	175	148
8 years in 10	205	181	155
5 years in 10	218	193	168
2 years in 10	231	204	181
1 year in 10	238	210	188

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AddA	Avonburg silt loam, 0 to 2 percent slopes	11,348	4.7
AddB2	Avonburg silt loam, 2 to 4 percent slopes, eroded	451	0.2
BbhA	Bartle silt loam, 0 to 2 percent slopes	2,023	0.8
BcrAQ	Beanblossom silt loam, 1 to 3 percent slopes, rarely flooded	439	0.2
BcrAW	Beanblossom silt loam, 1 to 3 percent slopes, occasionally flooded, very brief duration	3,384	1.4
BdoA	Bedford silt loam, 0 to 2 percent slopes	114	*
BdoB	Bedford silt loam, 2 to 6 percent slopes	95	*
BfbC2	Blocher, soft bedrock substratum-Weddel silt loams, 6 to 12 percent slopes, eroded	2,190	0.9
BfcC3	Blocher, soft bedrock substratum-Weddel complex, 6 to 12 percent slopes, severely eroded	830	0.3
BnyD3	Bonnell clay loam, 12 to 22 percent slopes, severely eroded	861	0.4
BobE5	Bonnell-Hickory clay loams, 15 to 30 percent slopes, gullied	18	*
BodAW	Bonnie silt loam, 0 to 1 percent slopes, occasionally flooded, very brief duration	381	0.2
BvoG	Brownstown-Gilwood silt loams, 25 to 75 percent slopes	520	0.2
CcaG	Caneyville-Rock outcrop complex, 25 to 60 percent slopes	5,971	2.5
CkkB2	Cincinnati silt loam, 2 to 6 percent slopes, eroded	7,421	3.1
CldC2	Cincinnati-Blocher silt loams, 6 to 12 percent slopes, eroded	2,807	1.2
CldC3	Cincinnati-Blocher silt loams, 6 to 12 percent slopes, severely eroded	1,421	0.6
ClfA	Cobbsfork silt loam, 0 to 1 percent slopes	4,578	1.9
ComC	Coolville silt loam, 6 to 12 percent slopes	3,201	1.3
ConC3	Coolville-Rarden complex, 6 to 12 percent slopes, severely eroded	616	0.3
ConD	Coolville-Rarden complex, 12 to 18 percent slopes	4,835	2.0
CspA	Crider silt loam, 0 to 2 percent slopes	226	*
CspB2	Crider silt loam, 2 to 6 percent slopes, eroded	5,192	2.2
CtrB2	Crider silt loam, karst, undulating, eroded	1,638	0.7
CtwB	Crider-Bedford-Navilleton silt loams, 2 to 6 percent slopes	3,758	1.6
CwaAQ	Cuba silt loam, 0 to 2 percent slopes, rarely flooded	51	*
CxgC3	Crider-Haggatt complex, 6 to 12 percent slopes, severely eroded	653	0.3
CxhC2	Crider-Haggatt silt loams, 6 to 12 percent slopes, eroded	2,395	1.0
CxmC2	Crider-Haggatt silt loams, karst, rolling, eroded	3,869	1.6
CxnC3	Crider-Haggatt complex, karst, rolling, severely eroded	1,888	0.8
DbrG	Deam silty clay loam, 20 to 55 percent slopes	2,963	1.2
DdsAW	Dearborn silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	493	0.2
DfnA	Dubois silt loam, 0 to 2 percent slopes	116	*
DtvC2	Deputy-Trappist silt loams, 6 to 12 percent slopes, eroded	2,837	1.2
EbpD2	Eden silty clay loam, 12 to 25 percent slopes, eroded	107	*
EesA	Elkinsville-Millstone silt loams, 0 to 2 percent slopes	1,117	0.5
EesB	Elkinsville-Millstone silt loams, 2 to 6 percent slopes	1,462	0.6
EesC2	Elkinsville-Millstone silt loams, 6 to 12 percent slopes, eroded	293	0.1
EesD2	Elkinsville-Millstone silt loams, 12 to 18 percent slopes, eroded	192	*
EesFQ	Elkinsville-Millstone silt loams, 18 to 40 percent slopes, rarely flooded	209	*
EsaG	Eden silty clay loam, 25 to 60 percent slopes, very rocky	1,844	0.8
GgbG	Gilwood-Brownstown silt loams, 25 to 75 percent slopes	10,252	4.3
GgfD	Gilwood-Wrays silt loams, 6 to 18 percent slopes	1,071	0.4
GgfE2	Gilwood-Wrays silt loams, 12 to 25 percent slopes, eroded	2,036	0.8
GmaG	Gnawbone-Kurtz silt loams, 20 to 60 percent slopes	7,468	3.1
GyaD2	Grayford silt loam, 12 to 25 percent slopes, eroded	436	0.2
GyaD3	Grayford silt loam, 12 to 25 percent slopes, severely eroded	148	*
GyaD5	Grayford silt loam, 12 to 25 percent slopes, gullied	23	*
GykD2	Grayford silt loam, karst, hilly, eroded	581	0.2
GykD3	Grayford silt loam, karst, hilly, severely eroded	625	0.3
HcaA	Hatfield silt loam, 0 to 2 percent slopes	330	0.1
HccB2	Haubstadt silt loam, 2 to 6 percent slopes, eroded	178	*
HcdC2	Haubstadt-Shircliff silt loams, 6 to 15 percent slopes, eroded	2	*
HceC3	Haubstadt-Shircliff complex, 6 to 15 percent slopes, severely eroded	1	*
HcgAH	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	141	*
HcgAV	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration	1,655	0.7
HcgAW	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	3,761	1.6
HerE	Hickory-Bonnell complex, 12 to 25 percent slopes	1,345	0.6
HtwD2	Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded	2,699	1.1
HtzD3	Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded	1,677	0.7
HufAK	Huntington silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	887	0.4
HuhD2	Haggatt-Caneyville silt loams, karst, hilly, eroded	2,271	0.9

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
HujD3	Haggatt-Caneyville complex, karst, hilly, severely eroded	2,920	1.2
JaeB2	Jennings silt loam, 2 to 6 percent slopes, eroded	5,822	2.4
JafC2	Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, eroded	2,483	1.0
JafC3	Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, severely eroded	1,321	0.5
KxkC2	Knobcreek-Navilleton silt loams, 6 to 12 percent slopes, eroded	3,459	1.4
KxlC3	Knobcreek-Haggatt-Caneyville complex, 6 to 12 percent slopes, severely eroded	139	*
KxlE3	Knobcreek-Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded	23	*
KxmE2	Knobcreek-Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded	457	0.2
KxoC2	Knobcreek-Navilleton-Haggatt silt loams, karst, rolling, eroded	1,225	0.5
KxpD2	Knobcreek-Haggatt-Caneyville silt loams, karst, hilly, eroded	891	0.4
LpoAK	Lindside silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	41	*
McgC2	Markland silt loam, 6 to 12 percent slopes, eroded	144	*
McnGQ	Markland silt loam, 18 to 50 percent slopes, rarely flooded	265	0.1
McpC3	Markland silty clay loam, 6 to 12 percent slopes, severely eroded	45	*
McuDQ	Markland silty clay loam, 12 to 25 percent slopes, severely eroded, rarely flooded	48	*
MdqDQ	Markland silt loam, 12 to 25 percent slopes, eroded, rarely flooded	326	0.1
MhuA	McGary silt loam, 0 to 2 percent slopes	375	0.2
MhyA	Medora silt loam, 0 to 2 percent slopes	58	*
MhyB2	Medora silt loam, 2 to 6 percent slopes, eroded	988	0.4
MhyC2	Medora silt loam, 6 to 12 percent slopes, eroded	146	*
MhyC3	Medora silt loam, 6 to 12 percent slopes, severely eroded	120	*
MsvA	Montgomery silty clay loam, 0 to 1 percent slopes	54	*
NaaA	Nabb silt loam, 0 to 2 percent slopes	4,217	1.8
NaaB2	Nabb silt loam, 2 to 6 percent slopes, eroded	8,324	3.5
NbhAK	Newark silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration	244	0.1
OfbAW	Oldenburg loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	1	*
PcrB2	Pekin silt loam, 2 to 6 percent slopes, eroded	4,829	2.0
PcrC2	Pekin silt loam, 6 to 12 percent slopes, eroded	791	0.3
PcrC3	Pekin silt loam, 6 to 12 percent slopes, severely eroded	392	0.2
PhaA	Peoga silt loam, 0 to 1 percent slopes	167	*
Pml	Pits, quarry	1,504	0.6
Ppu	Pits, sand and gravel	212	*
RblD3	Rarden silty clay loam, 12 to 18 percent slopes, severely eroded	380	0.2
RbmD5	Rarden silty clay, 6 to 18 percent slopes, gullied	33	*
RptG	Rohan-Jessietown complex, 25 to 60 percent slopes, rocky	2,545	1.1
RtcA	Ryker silt loam, 0 to 2 percent slopes	686	0.3
RtcB2	Ryker silt loam, 2 to 6 percent slopes, eroded	3,281	1.4
RzrB2	Ryker silt loam, karst, undulating, eroded	6,751	2.8
RztC2	Ryker-Grayford silt loams, 6 to 12 percent slopes, eroded	2,253	0.9
RztC3	Ryker-Grayford silt loams, 6 to 12 percent slopes, severely eroded	1,461	0.6
RzvC2	Ryker-Grayford silt loams, karst, rolling, eroded	2,620	1.1
RzvC3	Ryker-Grayford silt loams, karst, rolling, severely eroded	1,287	0.5
SceB2	Scottsburg silt loam, 2 to 4 percent slopes, eroded	2,629	1.1
SfyB	Shircliff silt loam, 2 to 6 percent slopes	1,191	0.5
SoaB	Spickert silt loam, 2 to 6 percent slopes	335	0.1
SodB	Spickert silt loam, terrace, 1 to 4 percent slopes	1	*
SolC2	Spickert-Wrays silt loams, 6 to 12 percent slopes, eroded	1,000	0.4
StaAQ	Steff silt loam, 0 to 2 percent slopes, rarely flooded	325	0.1
StdAQ	Stendal silt loam, 0 to 2 percent slopes, rarely flooded	1,396	0.6
StdAW	Stendal silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	1,348	0.6
ThaC2	Trappist silt loam, 6 to 12 percent slopes, eroded	6	*
ThbC3	Trappist silty clay loam, 6 to 12 percent slopes, severely eroded	1	*
ThbD5	Trappist silty clay loam, 6 to 18 percent slopes, gullied	163	*
ThcD3	Trappist-Rohan complex, 12 to 25 percent slopes, severely eroded	2,111	0.9
ThdD	Trappist-Rohan silt loams, 12 to 25 percent slopes	2,648	1.1
TsaC3	Trappist-Deputy complex, 6 to 12 percent slopes, severely eroded	2,721	1.1
Uaa	Udorthents, cut and filled	4,087	1.7
UaoAK	Udifluvents, cut and filled-Urban land complex, 0 to 2 percent slopes, occasionally flooded, brief duration	315	0.1
UedA	Urban land-Aquents, clayey substratum, complex, lake plain, 0 to 3 percent slopes	3,641	1.5

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
UndAY	Urban land-Udifluvents complex, leveed, 0 to 2 percent slopes	128	*
UngB	Urban land-Udarents, fragipan substratum, complex, till plain, 0 to 12 percent slopes	6,392	2.7
UnkB	Urban land-Udarents, silty substratum, complex, terrace, 0 to 6 percent slopes	601	0.2
UnpA	Urban land-Udarents, loamy substratum, complex, terrace, 0 to 3 percent slopes	5,176	2.2
UnsB	Urban land-Udarents, clayey substratum, complex, hills, 2 to 10 percent slopes	3,277	1.4
W	Water	2,195	0.9
WaaAV	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration	2,608	1.1
WaaAW	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	1,851	0.8
WedB2	Weddel silt loam, 2 to 6 percent slopes, eroded	2,791	1.2
WhcD	Wellrock-Gnawbone silt loams, 6 to 20 percent slopes	134	*
WnmA	Whitcomb silt loam, 0 to 2 percent slopes	340	0.1
WokAV	Wilbur silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration	2,233	0.9
WokAW	Wilbur silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	3,369	1.4
WprAW	Wirt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	1	*
	Total	240,736	100.0

* Less than 0.1 percent.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture

(See text for a description of the limitations and hazards listed in this table. Absence of an entry indicates that the map unit or component of the map unit is generally not used as cropland or pasture)

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
AddA:		
Avonburg	Wetness, low pH, crusting, restricted permeability.	Trafficability, low pH.
AddB2:		
Avonburg	Wetness, low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Trafficability, low pH, water erosion.
BbhA:		
Bartle	Wetness, low pH, crusting, moderate available water capacity, restricted permeability.	Trafficability, low pH.
BcrAQ:		
Beanblossom	Low pH, crusting, moderate available water capacity.	Low pH.
BcrAW:		
Beanblossom	Flooding, low pH, crusting, moderate available water capacity.	Flooding, low pH.
BdoA:		
Bedford	Limited rooting depth (fragipan), low pH, crusting, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH.
BdoB:		
Bedford	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
BfbC2:		
Blocher, soft bedrock substratum	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
Weddel	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
BfcC3:		
Blocher, soft bedrock substratum	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
BfcC3:		
Weddel	Wetness, low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
BnyD3:		
Bonnell	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
BobE5:		
Bonnell	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Hickory	Equipment limitation (slope), low pH, crusting, water erosion.	Equipment limitation (slope), low pH, water erosion.
BodAW:		
Bonnie	Flooding, ponding, wetness, low pH, crusting.	Flooding, ponding, wetness, trafficability, low pH.
BvoG:		
Brownstown	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Gilwood	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
CcaG:		
Caneyville	Equipment limitation (slope), low pH, water erosion, low available water capacity, areas of rock outcrop.	Equipment limitation (slope), low pH, water erosion, low available water capacity, areas of rock outcrop.
Rock outcrop.		
CkkB2:		
Cincinnati	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
CldC2:		
Cincinnati	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
Blocher	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
CldC3:		
Cincinnati	Wetness, limited rooting depth (fragipan), low pH, crusting, water erosion, low available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion, low available water capacity.
Blocher	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
ClfA:		
Cobbsfork	Ponding, wetness, low pH, crusting, restricted permeability.	Ponding, wetness, trafficability, low pH.
ComC:		
Coolville	Wetness, low pH, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
ConC3:		
Coolville	Wetness, low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Rarden	Wetness, low pH, crusting, water erosion, low available water capacity, restricted permeability.	Low pH, water erosion, low available water capacity.
ConD:		
Coolville	Equipment limitation (slope), wetness, low pH, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
Rarden	Equipment limitation (slope), wetness, low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
CspA:		
Crider	Low pH, crusting	Low pH.
CspB2:		
Crider	Low pH, crusting, water erosion.	Low pH, water erosion.
CtrB2:		
Crider	Low pH, crusting, water erosion.	Low pH, water erosion.
CtwB:		
Crider	Low pH, crusting, water erosion.	Low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
CtwB:		
Bedford	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
Navilleton	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
CwaAQ:		
Cuba	Low pH, crusting	Low pH.
CxgC3:		
Crider	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, low available water capacity.	Low pH, water erosion, low available water capacity.
CxhC2:		
Crider	Low pH, crusting, water erosion.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
CxmC2:		
Crider	Low pH, crusting, water erosion.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
CxnC3:		
Crider	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, low available water capacity.	Low pH, water erosion, low available water capacity.
DbrG:		
Deam	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
DdsAW:		
Dearborn	Flooding, high pH, low available water capacity.	Flooding, high pH, low available water capacity.
DfnA:		
Dubois	Wetness, limited rooting depth (fragipan), low pH, crusting, restricted permeability.	Trafficability, limited rooting depth (fragipan), low pH.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
DtvC2:		
Deputy	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Trappist	Low pH, crusting, water erosion, low available water capacity, restricted permeability.	Low pH, water erosion, low available water capacity.
EbpD2:		
Eden	Equipment limitation (slope), low pH, clodding, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
EesA:		
Elkinsville	Low pH, crusting	Low pH.
Millstone	Low pH, crusting	Low pH.
EesB:		
Elkinsville	Low pH, crusting, water erosion.	Low pH, water erosion.
Millstone	Low pH, crusting, water erosion.	Low pH, water erosion.
EesC2:		
Elkinsville	Low pH, crusting, water erosion.	Low pH, water erosion.
Millstone	Low pH, crusting, water erosion.	Low pH, water erosion.
EesD2:		
Elkinsville	Equipment limitation (slope), low pH, crusting, water erosion.	Equipment limitation (slope), low pH, water erosion.
Millstone	Equipment limitation (slope), low pH, crusting, water erosion.	Equipment limitation (slope), low pH, water erosion.
EesFQ:		
Elkinsville	Equipment limitation (slope), low pH, water erosion.	Equipment limitation (slope), low pH, water erosion.
Millstone	Equipment limitation (slope), low pH, water erosion.	Equipment limitation (slope), low pH, water erosion.
EsaG:		
Eden	Equipment limitation (slope), low pH, clodding, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
GgbG:		
Gilwood	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Brownstown	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
GgfD:		
Gilwood	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Wrays	Equipment limitation (slope), low pH, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GgfE2:		
Gilwood	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Wrays	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GmaG:		
Gnawbone	Equipment limitation (slope), low pH, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
Kurtz	Equipment limitation (slope), low pH, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GyaD2:		
Grayford	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GyaD3:		
Grayford	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GyaD5:		
Grayford	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
GykD2:		
Grayford	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
GykD3:		
Grayford	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
HcaA:		
Hatfield	Wetness, low pH, crusting, moderate available water capacity, restricted permeability.	Trafficability, low pH.
HccB2:		
Haubstadt	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
HcdC2:		
Haubstadt	Equipment limitation (slope), limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), limited rooting depth (fragipan), low pH, water erosion.
Shircliff	Equipment limitation (slope), low pH, crusting, water erosion, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
HceC3:		
Haubstadt	Equipment limitation (slope), wetness, limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), limited rooting depth (fragipan), low pH, water erosion.
Shircliff	Equipment limitation (slope), low pH, crusting, water erosion, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
HcgAH:		
Haymond	Flooding, low pH, crusting	Flooding, low pH.
HcgAV:		
Haymond	Flooding, low pH, crusting	Flooding, low pH.
HcgAW:		
Haymond	Flooding, low pH, crusting	Flooding, low pH.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
HerE:		
Hickory	Equipment limitation (slope), low pH, water erosion.	Equipment limitation (slope), low pH, water erosion.
Bonnell	Equipment limitation (slope), low pH, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
HtwD2:		
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
HtzD3:		
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
HufAK:		
Huntington	Flooding, low pH	Flooding, low pH.
HuhD2:		
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
HujD3:		
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
JaeB2:		
Jennings	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
JafC2:		
Jennings	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
Blocher, hard bedrock substratum	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
JafC3:		
Jennings	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
Blocher, hard bedrock substratum	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
KxkC2:		
Knobcreek	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Navilleton	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
KxlC3:		
Knobcreek	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, low available water capacity.	Low pH, water erosion, low available water capacity.
Caneyville	Low pH, crusting, water erosion, low available water capacity.	Low pH, water erosion, low available water capacity.
KxlE3:		
Knobcreek	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
KxlE3:		
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
KxmE2:		
Knobcreek	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
KxoC2:		
Knobcreek	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Navilleton	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
Haggatt	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
KxpD2:		
Knobcreek	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
Haggatt	Equipment limitation (slope), low pH, crusting, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Caneyville	Equipment limitation (slope), low pH, crusting, water erosion, low available water capacity.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
LpoAK:		
Lindside	Flooding, low pH, crusting	Flooding, low pH.
McgC2:		
Markland	Low pH, crusting, water erosion.	Low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
McnGQ:		
Markland	Equipment limitation (slope), low pH, water erosion.	Equipment limitation (slope), low pH, water erosion.
McpC3:		
Markland	Low pH, crusting, water erosion.	Low pH, water erosion.
McuDQ:		
Markland	Equipment limitation (slope), low pH, crusting, water erosion.	Equipment limitation (slope), low pH, water erosion.
MdqDQ:		
Markland	Equipment limitation (slope), low pH, crusting, water erosion.	Equipment limitation (slope), low pH, water erosion.
MhuA:		
McGary	Wetness, low pH, crusting	Trafficability, low pH.
MhyA:		
Medora	Limited rooting depth (fragipan), low pH, crusting, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH.
MhyB2:		
Medora	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
MhyC2:		
Medora	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
MhyC3:		
Medora	Wetness, limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
MsvA:		
Montgomery	Ponding, wetness, clodding, restricted permeability.	Ponding, wetness, trafficability.
NaaA:		
Nabb	Limited rooting depth (fragipan), low pH, crusting, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
NaaB2:		
Nabb	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
NbhAK:		
Newark	Flooding, wetness, low pH, crusting.	Flooding, trafficability, low pH.
OfbAW:		
Oldenburg	Flooding, low pH, crusting, moderate available water capacity.	Flooding, low pH.
PcrB2:		
Pekin	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
PcrC2:		
Pekin	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
PcrC3:		
Pekin	Wetness, low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
PhaA:		
Peoga	Ponding, wetness, low pH, crusting, restricted permeability.	Ponding, wetness, trafficability, low pH.
Pml.		
Pits, quarry		
Ppu.		
Pits, sand and gravel		
RblD3:		
Rarden	Equipment limitation (slope), wetness, low pH, crusting, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
RbmD5:		
Rarden	Equipment limitation (slope), wetness, low pH, clodding, water erosion, very low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, very low available water capacity, .

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
RptG:		
Rohan	Equipment limitation (slope), low pH, crusting, water erosion, very low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, very low available water capacity, .
Jessietown	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
RtcA:		
Ryker	Low pH, crusting	Low pH.
RtcB2:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
RzrB2:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
RztC2:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
Grayford	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
RztC3:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
Grayford	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
RzvC2:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
Grayford	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
RzvC3:		
Ryker	Low pH, crusting, water erosion.	Low pH, water erosion.
Grayford	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
SceB2:		
Scottsburg	Low pH, crusting, water erosion, restricted permeability.	Low pH, water erosion.
SfyB:		
Shircliff	Low pH, crusting, water erosion.	Low pH, water erosion.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
SoaB:		
Spickert	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
SodB:		
Spickert	Limited rooting depth (fragipan), low pH, crusting, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH.
SolC2:		
Spickert	Limited rooting depth (fragipan), low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Limited rooting depth (fragipan), low pH, water erosion.
Wrays	Low pH, crusting, water erosion, moderate available water capacity.	Low pH, water erosion.
StaAQ:		
Steff	Low pH, crusting	Low pH.
StdAQ:		
Stendal	Wetness, low pH, crusting	Trafficability, low pH.
StdAW:		
Stendal	Flooding, wetness, low pH, crusting.	Flooding, trafficability, low pH.
ThaC2:		
Trappist	Low pH, crusting, water erosion, low available water capacity, restricted permeability.	Low pH, water erosion, low available water capacity.
ThbC3:		
Trappist	Low pH, water erosion, low available water capacity, restricted permeability.	Low pH, water erosion, low available water capacity.
ThbD5:		
Trappist	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
ThcD3:		
Trappist	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Rohan	Equipment limitation (slope), low pH, crusting, water erosion, very low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, very low available water capacity, .

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
ThdD:		
Trappist	Equipment limitation (slope), low pH, water erosion, low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, low available water capacity.
Rohan	Equipment limitation (slope), low pH, water erosion, very low available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion, very low available water capacity, .
TsaC3:		
Trappist	Low pH, water erosion, low available water capacity, restricted permeability.	Low pH, water erosion, low available water capacity.
Deputy	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
Uaa.		
Udorthents, cut and filled		
UaoAK:		
Udifluvents, cut and filled	Flooding, restricted permeability.	Flooding, very low available water capacity.
Urban land.		
UedA:		
Urban land.		
Aquents, clayey substratum	Restricted permeability	Very low available water capacity.
UndAY:		
Urban land.		
Udifluvents	Restricted permeability	Very low available water capacity.
UngB:		
Urban land.		
Udarents, fragipan substratum	Limited rooting depth (fragipan), restricted permeability.	Limited rooting depth (fragipan), very low available water capacity.
UnkB:		
Urban land.		
Udarents, silty substratum	Restricted permeability	Very low available water capacity.

Table 5.--Main Limitations and Hazards Affecting Cropland and Pasture--Continued

Map symbol and soil name	Limitations and hazards affecting cropland	Limitations and hazards affecting pasture
UnpA:		
Urban land.		
Udarents, loamy substratum	Restricted permeability	Very low available water capacity.
UnsB:		
Urban land.		
Udarents, clayey substratum	Restricted permeability	Very low available water capacity.
W.		
Water		
WaaAV:		
Wakeland	Flooding, wetness, low pH, crusting.	Flooding, trafficability limitation, low pH.
WaaAW:		
Wakeland	Flooding, wetness, low pH, crusting.	Flooding, trafficability limitation, low pH.
WedB2:		
Weddel	Low pH, crusting, water erosion, moderate available water capacity, restricted permeability.	Low pH, water erosion.
WhcD:		
Wellrock	Equipment limitation (slope), low pH, water erosion, moderate available water capacity.	Equipment limitation (slope), low pH, water erosion.
Gnawbone	Equipment limitation (slope), low pH, water erosion, moderate available water capacity, restricted permeability.	Equipment limitation (slope), low pH, water erosion.
WnmA:		
Whitcomb	Wetness, low pH, crusting, restricted permeability.	Trafficability, low pH.
WokAV:		
Wilbur	Flooding, low pH, crusting	Flooding, low pH.
WokAW:		
Wilbur	Flooding, low pH, crusting	Flooding, low pH.
WprAW:		
Wirt	Flooding, low pH, crusting	Flooding, low pH.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
AddA----------------- Avonburg	2w	115	40	46	3.8	7.6
AddB2---------------- Avonburg	2e	110	39	44	3.6	7.2
BbhA----------------- Bartle	2w	115	40	46	3.8	7.6
BcrAQ---------------- Beanblossom	2s	92	33	37	3.0	6.0
BcrAW---------------- Beanblossom	2w	87	30	30	2.9	5.8
BdoA----------------- Bedford	2w	98	34	44	3.2	6.4
BdoB----------------- Bedford	2e	98	34	44	3.2	6.4
BfbC2---------------- Blocher, soft bedrock substratum-Weddel	3e	92	32	37	3.0	6.0
BfcC3---------------- Blocher, soft bedrock substratum-Weddel	4e	87	30	35	2.9	5.8
BnyD3---------------- Bonnell	6e	67	24	29	2.2	4.4
BobE5---------------- Bonnell-Hickory	7e	---	---	---	---	---
BodAW---------------- Bonnie	2w	104	36	35	3.4	6.8
BvoG----------------- Brownstown-Gilwood	7e	---	---	---	---	---
CcaG----------------- Caneyville-Rock outcrop	7e	---	---	---	---	---
CkkB2---------------- Cincinnati	2e	90	32	41	3.0	6.0
CldC2---------------- Cincinnati-Blocher	3e	88	31	37	2.9	5.8
CldC3---------------- Cincinnati-Blocher	4e	85	30	36	2.8	5.6

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
ClfA----------------- Cobbsfork	3w	108	38	43	3.6	7.2
ComC----------------- Coolville	3e	74	26	33	2.5	5.0
ConC3---------------- Coolville-Rarden	4e	49	17	22	1.6	3.2
ConD----------------- Coolville-Rarden	4e	43	15	20	1.4	2.8
CspA----------------- Crider	1	119	42	48	4.0	8.0
CspB2---------------- Crider	2e	114	40	46	3.8	7.6
CtrB2---------------- Crider	2e	115	40	44	3.8	7.6
CtwB----------------- Crider-Bedford-Navilleton	2e	110	38	46	3.6	7.2
CwaAQ---------------- Cuba	1	120	42	48	4.0	8.0
CxgC3---------------- Crider-Haggatt	4e	77	27	32	2.5	5.0
CxhC2---------------- Crider-Haggatt	3e	89	32	37	3.0	6.0
CxmC2---------------- Crider-Haggatt	3e	89	32	37	3.0	6.0
CxnC3---------------- Crider-Haggatt	4e	79	28	31	2.6	5.2
DbrG----------------- Deam	7e	---	---	---	---	---
DdsAW---------------- Dearborn	3s	89	31	33	2.9	5.8
DfnA----------------- Dubois	2w	115	40	52	3.8	7.6
DtvC2---------------- Deputy-Trappist	3e	69	24	28	2.3	4.6
EbpD2---------------- Eden	4e	31	11	14	1.0	2.0
EesA----------------- Elkinsville-Millstone	1	117	41	47	3.9	7.8

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
EesB----------------- Elkinsville- Millstone	2e	117	41	47	3.9	7.8
EesC2---------------- Elkinsville- Millstone	3e	101	36	41	3.4	6.8
EesD2---------------- Elkinsville- Millstone	4e	88	31	35	2.9	5.8
EesFQ---------------- Elkinsville- Millstone	7e	---	---	---	---	---
EsaG----------------- Eden	7e	---	---	---	---	---
GgbG----------------- Gilwood-Brownstown	7e	---	---	---	---	---
GgfD----------------- Gilwood-Wrays	4e	59	21	24	2.0	4.0
GgfE2---------------- Gilwood-Wrays	6e	45	16	18	1.5	3.0
GmaG----------------- Gnawbone-Kurtz	7e	---	---	---	---	---
GyaD2---------------- Grayford	4e	71	25	31	2.3	4.6
GyaD3---------------- Grayford	6e	67	23	29	2.1	4.2
GyaD5---------------- Grayford	7e	---	---	---	---	---
GykD2---------------- Grayford	6e	75	26	30	2.4	4.8
GykD3---------------- Grayford	6e	69	24	27	2.2	4.4
HcaA----------------- Hatfield	2w	119	42	48	4.0	8.0
HccB2---------------- Haubstadt	2e	93	33	42	3.2	6.2
HcdC2---------------- Haubstadt-Shircliff	3e	77	27	34	2.5	5.0
HceC3---------------- Haubstadt-Shircliff	4e	72	25	32	2.4	4.8
HcgAH---------------- Haymond	2w	118	41	---	---	---

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
HcgAV----------------Haymond	2w	118	41	---	4.0	8.0
HcgAW----------------Haymond	2w	122	43	42	4.0	8.0
HerE-----------------Hickory-Bonnell	6e	75	26	31	2.5	5.0
HtwD2----------------Haggatt-Caneyville	4e	47	17	21	1.5	3.0
HtzD3----------------Haggatt-Caneyville	6e	35	13	16	1.2	2.4
HufAK----------------Huntington	2w	124	44	44	4.1	8.2
HuhD2----------------Haggatt-Caneyville	4e	49	17	20	1.6	3.2
HujD3----------------Haggatt-Caneyville	6e	40	14	15	1.3	2.6
JaeB2----------------Jennings	2e	87	31	38	2.9	5.8
JafC2----------------Jennings-Blocher, hard bedrock substratum	3e	84	29	36	2.7	5.4
JafC3----------------Jennings-Blocher, hard bedrock substratum	4e	81	28	34	2.6	5.2
KxkC2----------------Knobcreek-Navilleton	3e	83	29	35	2.8	5.6
KxlC3----------------Knobcreek-Haggatt-Caneyville	4e	62	22	27	2.0	4.0
KxlE3----------------Knobcreek-Haggatt-Caneyville	6e	49	17	21	1.6	3.2
KxmE2----------------Knobcreek-Haggatt-Caneyville	4e	57	20	25	1.9	3.8
KxoC2----------------Knobcreek-Navilleton-Haggatt	3e	80	28	34	2.6	5.2
KxpD2----------------Knobcreek-Haggatt Caneyville	4e	50	18	21	1.7	3.4

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
LpoAK---------------- Lindside	2w	121	43	43	4.1	8.2
McgC2---------------- Markland	4e	72	26	33	2.4	4.8
McnGQ---------------- Markland	7e	---	---	---	---	---
McpC3---------------- Markland	6e	69	24	30	2.3	4.6
McuDQ---------------- Markland	7e	43	15	20	1.4	2.8
MdqDQ---------------- Markland	6e	55	19	25	1.8	3.6
MhuA----------------- McGary	3w	99	35	40	3.3	6.6
MhyA----------------- Medora	2w	94	33	42	3.1	6.2
MhyB2---------------- Medora	2e	87	31	39	2.9	5.8
MhyC2---------------- Medora	3e	77	27	35	2.5	5.0
MhyC3---------------- Medora	4e	73	26	33	2.4	4.8
MsvA----------------- Montgomery	3w	113	40	45	3.8	7.6
NaaA----------------- Nabb	2w	98	34	43	3.2	6.4
NaaB2---------------- Nabb	2e	93	33	41	3.1	6.2
NbhAK---------------- Newark	2w	127	45	45	4.2	8.4
OfbAW---------------- Oldenburg	2w	105	37	40	3.5	7.0
PcrB2---------------- Pekin	2e	98	34	43	3.2	6.4
PcrC2---------------- Pekin	3e	81	28	36	2.6	5.2
PcrC3---------------- Pekin	4e	78	27	34	2.5	5.0
PhaA----------------- Peoga	3w	108	38	43	3.6	7.2

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
Pml. Pits, quarry						
Ppu. Pits, sand and gravel						
RblD3----------------- Rarden	7e	22	8	10	0.7	1.4
RbmD5----------------- Rarden	7e	---	---	---	---	---
RptG----------------- Rohan-Jessietown	7e	---	---	---	---	---
RtcA----------------- Ryker	1	119	42	48	4.0	8.0
RtcB2----------------- Ryker	2e	113	40	46	3.7	7.4
RzrB2----------------- Ryker	2e	115	40	45	3.7	7.4
RztC2----------------- Ryker-Grayford	3e	90	32	36	3.0	6.0
RztC3----------------- Ryker-Grayford	4e	85	30	34	2.8	5.6
RzvC2----------------- Ryker-Grayford	3e	95	33	37	3.1	6.2
RzvC3----------------- Ryker-Grayford	4e	88	31	35	2.9	5.8
SceB2----------------- Scottsburg	2e	99	35	40	3.3	6.6
SfyB----------------- Shircliff	3e	93	33	41	3.1	6.2
SoaB----------------- Spickert	2e	91	32	41	3.0	6.0
SodB----------------- Spickert	2e	93	33	42	3.1	6.2
SolC2----------------- Spickert-Wrays	3e	77	27	33	2.5	5.0
StaAQ----------------- Steff	1	120	42	48	4.0	8.0
StdAQ----------------- Stendal	2w	120	42	48	4.0	8.0
StdAW----------------- Stendal	2w	115	40	40	3.8	7.6

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
ThaC2---------------- Trappist	3e	42	15	17	1.4	2.8
ThbC3---------------- Trappist	4e	34	12	14	1.1	2.2
ThbD5---------------- Trappist	6e	---	---	---	---	---
ThcD3---------------- Trappist-Rohan	6e	15	5	6	0.5	1.0
ThdD----------------- Trappist-Rohan	4e	24	9	10	0.8	1.6
TsaC3---------------- Trappist-Deputy	4e	50	18	20	1.6	3.2
Uaa. Udorthents, cut and filled						
UaoAK. Udifluvents, cut and filled-Urban land						
UedA. Urban land-Aquents, clayey substratum						
UndAY. Urban land-Udifluvents						
UngB. Urban land-Udarents, fragipan substratum						
UnkB. Urban land-Udarents, silty substratum						
UnpA. Urban land-Udarents, loamy substratum						
UnsB. Urban land-Udarents, clayey substratum						
W. Water						
WaaAV---------------- Wakeland	2w	121	43	---	4.0	8.0
WaaAW---------------- Wakeland	2w	125	44	43	4.1	8.2

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Pasture
		Bu	Bu	Bu	Tons	AUM*
WedB2---------------- Weddel	2e	98	34	39	3.2	6.4
WhcD----------------- Wellrock-Gnawbone	4e	60	21	24	1.9	3.8
WnmA----------------- Whitcomb	2w	101	35	45	3.3	6.6
WokAV---------------- Wilbur	2w	120	42	---	4.0	8.0
WokAW---------------- Wilbur	2w	125	44	43	4.1	8.2
WprAW---------------- Wirt	2w	102	36	34	3.4	6.8

* Animal unit month: The amount of forage or feed required to feed one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Table 7.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the map unit name)

Map symbol	Map unit name
AddA	Avonburg silt loam, 0 to 2 percent slopes (where drained)
AddB2	Avonburg silt loam, 2 to 4 percent slopes, eroded (where drained)
BbhA	Bartle silt loam, 0 to 2 percent slopes (where drained)
BcrAQ	Beanblossom silt loam, 1 to 3 percent slopes, rarely flooded
BcrAW	Beanblossom silt loam, 1 to 3 percent slopes, occasionally flooded, very brief duration
BdoA	Bedford silt loam, 0 to 2 percent slopes
BdoB	Bedford silt loam, 2 to 6 percent slopes
BodAW	Bonnie silt loam, 0 to 1 percent slopes, occasionally flooded, very brief duration (where drained)
CkkB2	Cincinnati silt loam, 2 to 6 percent slopes, eroded
ClfA	Cobbsfork silt loam, 0 to 1 percent slopes (where drained)
CspA	Crider silt loam, 0 to 2 percent slopes
CspB2	Crider silt loam, 2 to 6 percent slopes, eroded
CtrB2	Crider silt loam, karst, undulating, eroded
CtwB	Crider-Bedford-Navilleton silt loams, 2 to 6 percent slopes
CwaAQ	Cuba silt loam, 0 to 2 percent slopes, rarely flooded
DdsAW	Dearborn silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
DfnA	Dubois silt loam, 0 to 2 percent slopes (where drained)
EesA	Elkinsville-Millstone silt loams, 0 to 2 percent slopes
EesB	Elkinsville-Millstone silt loams, 2 to 6 percent slopes
HcaA	Hatfield silt loam, 0 to 2 percent slopes (where drained)
HccB2	Haubstadt silt loam, 2 to 6 percent slopes, eroded
HcgAH	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, brief duration (where protected from flooding or not frequently flooded during the growing season)
HcgAV	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration (where protected from flooding or not frequently flooded during the growing season)
HcgAW	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
HufAK	Huntington silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration
JaeB2	Jennings silt loam, 2 to 6 percent slopes, eroded
LpoAK	Lindside silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration
MhuA	McGary silt loam, 0 to 2 percent slopes (where drained)
MhyA	Medora silt loam, 0 to 2 percent slopes
MhyB2	Medora silt loam, 2 to 6 percent slopes, eroded
MsvA	Montgomery silty clay loam, 0 to 1 percent slopes (where drained)
NaaA	Nabb silt loam, 0 to 2 percent slopes
NaaB2	Nabb silt loam, 2 to 6 percent slopes, eroded
NbhAK	Newark silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration (where drained)
OfbAW	Oldenburg loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
PcrB2	Pekin silt loam, 2 to 6 percent slopes, eroded
PhaA	Peoga silt loam, 0 to 1 percent slopes (where drained)
RtcA	Ryker silt loam, 0 to 2 percent slopes
RtcB2	Ryker silt loam, 2 to 6 percent slopes, eroded
RzrB2	Ryker silt loam, karst, undulating, eroded
SceB2	Scottsburg silt loam, 2 to 4 percent slopes, eroded
SfyB	Shircliff silt loam, 2 to 6 percent slopes
SoaB	Spickert silt loam, 2 to 6 percent slopes
SodB	Spickert silt loam, terrace, 1 to 4 percent slopes
StaAQ	Steff silt loam, 0 to 2 percent slopes, rarely flooded
StdAQ	Stendal silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
StdAW	Stendal silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration (where drained)
WaaAV	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration (where drained and either protected from flooding or not frequently flooded during the growing season)
WaaAW	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration (where drained)
WedB2	Weddel silt loam, 2 to 6 percent slopes, eroded
WnmA	Whitcomb silt loam, 0 to 2 percent slopes (where drained)
WokAV	Wilbur silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration (where protected from flooding or not frequently flooded during the growing season)

Table 7.--Prime Farmland--Continued

Map symbol	Map unit name
WokAW	Wilbur silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
WprAW	Wirt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

Table 8.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
AddA:					
Avonburg	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
AddB2:					
Avonburg	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
BbhA:					
Bartle	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
BcrAQ:					
Beanblossom	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
BcrAW:					
Beanblossom	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, chinkapin oak, common hackberry, Norway spruce, shingle oak, swamp white oak.	Baldcypress, eastern cottonwood, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
BdoA:					
Bedford	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
BdoB:					
Bedford	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
BfbC2:					
Blocher, soft bedrock substratum	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Weddel	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
BfcC3:					
Blocher, soft bedrock substratum	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
BfcC3:					
Weddel	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
BnyD3:					
Bonnell	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
BobE5:					
Bonnell	American elder, black chokeberry, highbush cranberry, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazel alder, hazelnut, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	Black oak, chinkapin oak, hackberry, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, eastern white pine, green ash, northern red oak, Norway spruce, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
Hickory	Black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazelnut, nannyberry, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab.	American plum, eastern redcedar, hackberry, northern white-cedar, serviceberry, Washington hawthorn.	Baldcypress, black cherry, black walnut, blackgum, northern red oak, Norway spruce, pecan, pin oak, tuliptree, Virginia pine, white ash.	Eastern cottonwood, eastern white pine, green ash, imperial Carolina poplar, red maple, river birch, silver maple.
BodAW:					
Bonnie	American elder, black chokeberry, common buttonbush, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Nannyberry, roughleaf dogwood, speckled alder.	Balsam fir, hemlock, jack pine, shellbark hickory, sugar maple.	Blackgum, bur oak, pecan, swamp white oak.	Baldcypress, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
BvoG:					
Brownstown	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Gilwood	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
CcaG:					
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
Rock outcrop.					
CkkB2:					
Cincinnati	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
CldC2:					
Cincinnati	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
CldC2:					
Blocher	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
CldC3:					
Cincinnati	American elder, black chokeberry, highbush cranberry, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazel alder, hazelnut, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	Black oak, chinkapin oak, hackberry, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, eastern white pine, green ash, northern red oak, Norway spruce, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
Blocher	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
ClfA:					
Cobbsfork	Black chokeberry, common buttonbush, gray dogwood, ninebark, northern spicebush, silky dogwood.	Cockspur hawthorn, highbush blueberry.	Eastern redcedar, northern white-cedar, shellbark hickory.	Blackgum, pecan, shingle oak, swamp chestnut oak, swamp white oak.	American sycamore, baldcypress, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
ComC:					
Coolville	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
ConC3:					
Coolville	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
Rarden	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
ConD:					
Coolville	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
Rarden	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
CspA:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
CspB2:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
CtrB2:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
CtwB:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Bedford	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Navilleton	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
CwaAQ:					
Cuba	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
CxgC3:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
CxhC2:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
CxmC2:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
CxnC3:					
Crider	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
DbrG:					
Deam	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
DdsAW:					
Dearborn	American elder, common buttonbush, gray dogwood, highbush cranberry, northern spicebush, redosier dogwood, silky dogwood.	American hazelnut, blackhaw, cockspur hawthorn, nannyberry, pawpaw, prairie crabapple, roughleaf dogwood.	American plum, common hackberry, eastern redcedar, Washington hawthorn.	Bur oak, Kentucky coffeetree, Shumard's oak.	Eastern cottonwood, green ash, silver maple.
DfnA:					
Dubois	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
DtvC2:					
Deputy	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
EbpD2:					
Eden	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
EesA:					
Elkinsville	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Millstone	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
EesB:					
Elkinsville	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Millstone	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
EesC2:					
Elkinsville	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
EesC2:					
Millstone	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
EesD2:					
Elkinsville	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Millstone	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
EesFQ:					
Elkinsville	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Millstone	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
EsaG:					
Eden	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
GgbG:					
Gilwood	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Brownstown	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
GgfD:					
Gilwood	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Wrays	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
GgfE2:					
Gilwood	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Wrays	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
GmaG:					
Gnawbone	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Kurtz	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
GyaD2:					
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
GyaD3:					
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
GyaD5:					
Grayford	Black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazelnut, nannyberry, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, wild sweet crab.	American plum, eastern redcedar, hackberry, northern white-cedar, serviceberry, Washington hawthorn.	Baldcypress, black cherry, black walnut, blackgum, northern red oak, Norway spruce, pecan, pin oak, tuliptree, Virginia pine, white ash.	Eastern cottonwood, eastern white pine, green ash, imperial Carolina poplar, red maple, river birch, silver maple.
GykD2:					
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
GykD3:					
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
HcaA:					
Hatfield	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
HccB2:					
Haubstadt---------	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
HcdC2:					
Haubstadt---------	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Shircliff---------	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
HceC3:					
Haubstadt---------	American elder, black chokeberry, highbush cranberry, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazel alder, hazelnut, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	Black oak, chinkapin oak, hackberry, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, eastern white pine, green ash, northern red oak, Norway spruce, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
Shircliff---------	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
HcgAH:					
Haymond	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
HcgAV:					
Haymond	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
HcgAW:					
Haymond	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
HerE:					
Hickory	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
HerE:					
Bonnell	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
HtwD2:					
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
HtzD3:					
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
HufAK:					
Huntington	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
HuhD2:					
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
HujD3:					
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
JaeB2:					
Jennings----------	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
JafC2:					
Jennings----------	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazelnut, nannyberry, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	American plum, eastern redcedar, hackberry, northern white-cedar, serviceberry, Washington hawthorn.	Baldcypress, black oak, blackgum, bur oak, chinkapin oak, green ash, northern red oak, Norway spruce, tuliptree, Virginia pine, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
Blocher, hard bedrock substratum-------	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
JafC3:					
Jennings----------	American elder, black chokeberry, highbush cranberry, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazel alder, hazelnut, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	Black oak, chinkapin oak, hackberry, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, eastern white pine, green ash, northern red oak, Norway spruce, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
Blocher, hard bedrock substratum-------	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
KxkC2:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Navilleton	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
KxlC3:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
KxlE3:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Haggatt	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
KxmE2:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
KxmE2:					
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
KxoC2:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Navilleton	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
KxpD2:					
Knobcreek	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
KxpD2:					
Haggatt	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Caneyville	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood.	American plum, chestnut oak, common persimmon, eastern redcedar, scarlet oak, shagbark hickory, shingle oak, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, white oak.	Baldcypress, eastern cottonwood, eastern white pine, white ash.
LpoAK:					
Lindside	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
McgC2:					
Markland	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
McnGQ:					
Markland	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
McpC3: Markland	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
McuDQ: Markland	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
MdqDQ: Markland	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
MhuA: McGary	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, blackhaw, cockspur hawthorn, nannyberry, pawpaw, prairie crabapple, roughleaf dogwood, speckled alder.	American plum, common persimmon, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Cherrybark oak, eastern cottonwood, green ash, red maple, river birch, silver maple, sweetgum.
MhyA: Medora	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazelnut, nannyberry, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	American plum, eastern redcedar, hackberry, northern white-cedar, serviceberry, Washington hawthorn.	Baldcypress, black oak, blackgum, bur oak, chinkapin oak, green ash, northern red oak, Norway spruce, tuliptree, Virginia pine, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
MhyB2:					
Medora	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
MhyC2:					
Medora	American elder, black chokeberry, common juniper, coralberry, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazelnut, nannyberry, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	American plum, eastern redcedar, hackberry, northern white-cedar, serviceberry, Washington hawthorn.	Baldcypress, black oak, blackgum, bur oak, chinkapin oak, green ash, northern red oak, Norway spruce, tuliptree, Virginia pine, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
MhyC3:					
Medora	American elder, black chokeberry, highbush cranberry, redosier dogwood, silky dogwood, spicebush.	Arrowwood, blackhaw, hazel alder, hazelnut, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac, witchhazel.	Black oak, chinkapin oak, hackberry, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, eastern white pine, green ash, northern red oak, Norway spruce, white oak, white spruce.	Eastern cottonwood, imperial Carolina poplar, red maple, river birch, silver maple.
MsvA:					
Montgomery	American elder, black chokeberry, common buttonbush, gray dogwood, highbush cranberry, ninebark, redosier dogwood, silky dogwood, spicebush.	Nannyberry, roughleaf dogwood, speckled alder.	Balsam fir, hemlock, jack pine, shellbark hickory, sugar maple.	Blackgum, bur oak, pecan, swamp white oak.	Baldcypress, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
NaaA:					
Nabb	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
NaaB2:					
Nabb	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
NbhAK:					
Newark	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, cockspur hawthorn, nannyberry, roughleaf dogwood.	American plum, arrowwood, common persimmon, eastern redcedar, prairie crabapple, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
OfbAW:					
Oldenburg	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
PcrB2:					
Pekin	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
PcrC2:					
Pekin	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
PcrC3:					
Pekin	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
PhaA:					
Peoga	Black chokeberry, common buttonbush, gray dogwood, ninebark, northern spicebush, silky dogwood.	Cockspur hawthorn, highbush blueberry.	Eastern redcedar, northern white-cedar, shellbark hickory.	Blackgum, pecan, shingle oak, swamp chestnut oak, swamp white oak.	American sycamore, baldcypress, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
Pml. Pits, quarry					
Ppu. Pits, sand and gravel					
RblD3:					
Rarden	American elder, common juniper, coralberry, highbush cranberry, silky dogwood.	Arrowwood, blackhaw, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac.	American plum, eastern redcedar, hackberry, serviceberry, Washington hawthorn.	Black oak, blackgum, bur oak, eastern white pine, green ash, red maple, river birch, silver maple, Virginia pine.	Eastern cottonwood, imperial Carolina poplar.
RbmD5:					
Rarden	American elder, common juniper, coralberry, highbush cranberry, silky dogwood.	Arrowwood, blackhaw, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac.	American plum, eastern redcedar, hackberry, serviceberry, Washington hawthorn.	Black oak, blackgum, bur oak, eastern white pine, green ash, red maple, river birch, silver maple, Virginia pine.	Eastern cottonwood, imperial Carolina poplar.
RptG:					
Rohan.					
Jessietown	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
RtcA:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
RtcB2:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
RzrB2:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
RztC2:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
RztC3:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
RzvC2:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.
Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
RzvC3:					
Ryker	Black chokeberry, gray dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, Washington hawthorn.	Black cherry, black oak, black walnut, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, pecan, shingle oak, swamp white oak, white oak.	Baldcypress, black cherry, cherrybark oak, eastern white pine, pin oak, swamp chestnut oak, sweetgum, tuliptree, white ash.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
RzvC3: Grayford	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
SceB2: Scottsburg	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
SfyB: Shircliff	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
SoaB: Spickert	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
SodB: Spickert	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
SolC2:					
Spickert	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Wrays	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
StaAQ:					
Steff	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
StdAQ:					
Stendal	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
StdAW:					
Stendal	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, cockspur hawthorn, nannyberry, roughleaf dogwood.	American plum, arrowwood, common persimmon, eastern redcedar, prairie crabapple, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
ThaC2:					
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
ThbC3:					
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
ThbD5:					
Trappist	American elder, common juniper, coralberry, highbush cranberry, silky dogwood.	Arrowwood, blackhaw, prairie crabapple, roughleaf dogwood, shining sumac, smooth sumac, staghorn sumac.	American plum, eastern redcedar, hackberry, serviceberry, Washington hawthorn.	Black oak, blackgum, bur oak, eastern white pine, green ash, red maple, river birch, silver maple, Virginia pine.	Eastern cottonwood, imperial Carolina poplar.
ThcD3:					
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Rohan.					
ThdD:					
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Rohan.					

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
TsaC3:					
Trappist	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
Deputy	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
Uaa. Udorthents, cut and filled					
UaoAK: Udifluvents, cut and filled.					
Urban land.					
UedA: Urban land.					
Aquents, clayey substratum.					
UndAY: Urban land.					
Udifluvents.					
UngB: Urban land.					
Udarents, fragipan substratum.					
UnkB: Urban land.					
Udarents, silty substratum.					
UnpA: Urban land.					
Udarents, loamy substratum.					

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
UnsB:					
Urban land.					
Udarents, clayey substratum.					
W.					
Water					
WaaAV:					
Wakeland----------	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, cockspur hawthorn, nannyberry, roughleaf dogwood.	American plum, arrowwood, common persimmon, eastern redcedar, prairie crabapple, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
WaaAW:					
Wakeland----------	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, cockspur hawthorn, nannyberry, roughleaf dogwood.	American plum, arrowwood, common persimmon, eastern redcedar, prairie crabapple, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
WedB2:					
Weddel------------	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.
WhcD:					
Wellrock----------	Black chokeberry, gray dogwood, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, highbush blueberry.	American plum, common persimmon, eastern redcedar, shagbark hickory, sugar maple, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, northern red oak, Norway spruce, shingle oak, swamp chestnut oak, swamp white oak, white oak.	Baldcypress, cherrybark oak, eastern white pine, green ash, pin oak, sweetgum, tuliptree.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
WhcD:					
Gnawbone	American elder, black chokeberry, gray dogwood, highbush cranberry, ninebark, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, prairie crabapple, roughleaf dogwood, smooth sumac.	American plum, chestnut oak, common persimmon, eastern redcedar, shagbark hickory, Virginia pine, Washington hawthorn.	Black oak, blackgum, bur oak, common hackberry, Norway spruce, shingle oak, white oak.	Baldcypress, eastern cottonwood, eastern white pine, green ash, red maple.
WnmA:					
Whitcomb	American elder, black chokeberry, common buttonbush, highbush cranberry, ninebark, redosier dogwood, spicebush.	American hazelnut, American witchhazel, arrowwood, cockspur hawthorn, nannyberry, prairie crabapple, roughleaf dogwood.	American plum, eastern redcedar, northern white-cedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, eastern white pine, Norway spruce, shingle oak, Shumard's oak, swamp white oak, white ash.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
WokAV:					
Wilbur	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.
WokAW:					
Wilbur	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 8.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of-- <8	8-15	16-25	26-35	>35
WprAW:					
Wirt	Black chokeberry, gray dogwood, redosier dogwood, silky dogwood, spicebush.	American hazelnut, American witchhazel, blackhaw, cockspur hawthorn, common pawpaw, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac, wild sweet crab.	American plum, common persimmon, eastern redcedar, Washington hawthorn.	Blackgum, bur oak, common hackberry, pecan, shingle oak, swamp chestnut oak, swamp white oak.	Baldcypress, cherrybark oak, eastern cottonwood, green ash, pin oak, red maple, river birch, silver maple, sweetgum.

Table 9.--Forestland Productivity

(Note that eastern white pine, northern red oak, tuliptree, and white oak are not recommended for planting in low-lying areas. Absence of an entry indicates that information was not available)

Map symbol and soil name	Potential productivity			Trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
AddA:				
Avonburg	White oak	70	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Tuliptree	85	86	
	Sweetgum	80	86	
	Northern red oak	75	57	
AddB2:				
Avonburg	White oak	70	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Tuliptree	85	86	
	Sweetgum	80	86	
	Northern red oak	75	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
BbhA:				
Bartle	White oak	75	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Sweetgum	80	86	
	Tuliptree	85	86	
BcrAQ:				
Beanblossom	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
BcrAW:				
Beanblossom	---	---	---	Baldcypress, bitternut hickory, blackgum, bur oak, eastern cottonwood, eastern redcedar, pin oak, red maple, river birch, shingle oak, swamp white oak.
BdoA:				
Bedford	Northern red oak	75	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Sugar maple	75	43	
	Tuliptree	90	86	
	White oak	70	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
BdoB:				
Bedford	Northern red oak	75	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Sugar maple	75	43	
	Tuliptree	90	86	
	White oak	70	57	
BfbC2:				
Blocher, soft bedrock substratum	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	
Weddel	Northern red oak	70	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	75	57	
	White oak	65	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
BfcC3:				
Blocher, soft bedrock substratum	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	
Weddel	Northern red oak	65	43	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	70	57	
	White oak	60	43	
BnyD3:				
Bonnell	Northern red oak	70	57	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
BobE5:				
Bonnell	Northern red oak	65	43	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, tuliptree, white oak.
Hickory	White oak	85	72	Black cherry, black walnut, bur oak, cherrybark oak, eastern white pine, northern red oak, pecan, shagbark hickory, Shumard's oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
BodAW:				
Bonnie	Pin oak	90	72	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, Shumard's oak, silver maple, swamp white oak, sweetgum.
BvoG:				
Brownstown	Black oak	50	29	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Gilwood	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CcaG:				
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	90	86	
	White oak	64	43	
Rock outcrop.				
CkkB2:				
Cincinnati	Northern red oak	80	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
CldC2:				
Cincinnati	Northern red oak	80	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Blocher	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CldC3:				
Cincinnati	Northern red oak	80	57	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, tuliptree, white oak.
Blocher	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	
ClfA:				
Cobbsfork	Pin oak	100	86	American sycamore, baldcypress, blackgum, bur oak, eastern cottonwood, overcup oak, pin oak, red maple, Shumard's oak, silver maple, swamp white oak, sweetgum.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
ComC:				
Coolville	Northern red oak	66	43	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
ConC3:				
Coolville	Northern red oak	66	43	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
Rarden	Black oak	71	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
ConD:				
Coolville	Northern red oak	66	43	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
Rarden	Black oak	71	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
CspA:				
Crider	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CspB2:				
Crider	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	
CtrB2:				
Crider	Black walnut	80	0	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Northern red oak	84	72	
	Tuliptree	97	100	
	White oak	72	57	
CtwB:				
Crider	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CtwB:				
Bedford	Northern red oak	75	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Sugar maple	75	43	
	Tuliptree	90	86	
	White oak	70	57	
Navilleton	---	---	---	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
CwaAQ:				
Cuba	Tuliptree	100	114	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CxgC3:				
Crider	Tuliptree	97	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Black walnut	80	0	
	White oak	72	57	
	Northern red oak	84	72	
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
CxhC2:				
Crider	Tuliptree	97	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Black walnut	80	0	
	White oak	72	57	
	Northern red oak	84	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CxhC2:				
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
CxmC2:				
Crider	Tuliptree	97	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Black walnut	80	0	
	White oak	72	57	
	Northern red oak	84	72	
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
CxnC3:				
Crider	Tuliptree	97	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Black walnut	80	0	
	White oak	72	57	
	Northern red oak	84	72	
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
DbrG:				
Deam	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
DdsAW:				
Dearborn	---	---	---	Baldcypress, bitternut hickory, bur oak, common hackberry, eastern redcedar, Kentucky coffeetree, pecan, red maple, shellbark hickory, shingle oak, Shumard's oak, silver maple.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
DfnA:				
Dubois	Tuliptree	95	100	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Northern red oak	80	57	
DtvC2:				
Deputy	Northern red oak	71	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	
Trappist	White oak	62	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
EbpD2:				
Eden	Black oak	68	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Scarlet oak	68	57	
	White oak	61	43	
EesA:				
Elkinsville	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
Millstone	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Northern red oak	80	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
EesB:				
Elkinsville	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
Millstone	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Northern red oak	80	57	
EesC2:				
Elkinsville	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
EesC2:				
Millstone	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Northern red oak	80	57	
EesD2:				
Elkinsville	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
Millstone	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Northern red oak	80	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
EesFQ:				
Elkinsville	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
Millstone	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Northern red oak	80	57	
EsaG:				
Eden	Black oak	68	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Scarlet oak	68	57	
	White oak	61	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
GgbG:				
Gilwood	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Brownstown	Black oak	50	29	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
GgfD:				
Gilwood	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Wrays	Tuliptree	90	86	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	70	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to plant
			cu ft/ac	
GgfE2:				
Gilwood	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Wrays	Tuliptree	90	86	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	70	57	
GmaG:				
Gnawbone	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Kurtz	Northern red oak	60	43	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
GyaD2:				
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	
GyaD3:				
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	
GyaD5:				
Grayford	White oak	90	72	Black cherry, black walnut, bur oak, cherrybark oak, eastern white pine, northern red oak, pecan, shagbark hickory, Shumard's oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
GykD2:				
Grayford	Tuliptree	98	100	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	90	72	
GykD3:				
Grayford	Tuliptree	98	100	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	90	72	
HcaA:				
Hatfield	White oak	75	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Sweetgum	88	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HccB2:				
Haubstadt	Northern red oak	80	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
HcdC2:				
Haubstadt	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Shircliff	Tuliptree	105	114	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
HceC3:				
Haubstadt	Northern red oak	80	57	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HceC3:				
Shircliff	Tuliptree	105	114	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
HcgAH:				
Haymond	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
HcgAV:				
Haymond	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HcgAW:				
Haymond	Black walnut	70	0	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
HerE:				
Hickory	White oak	85	72	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Northern red oak	85	72	
	Tuliptree	95	100	
Bonnell	Northern red oak	80	57	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
	Tuliptree	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HtwD2:				
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	90	86	
	White oak	64	43	
HtzD3:				
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
Caneyville	Black oak	65	43	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Chinkapin oak	51	29	
	Eastern redcedar	36	43	
	Scarlet oak	53	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HufAK:				
Huntington	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
HuhD2:				
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	64	43	
HujD3:				
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
HujD3:				
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Eastern redcedar	46	57	
	White oak	64	43	
JaeB2:				
Jennings	Northern red oak	70	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Tuliptree	100	114	
	Black oak	65	43	
JafC2:				
Jennings	Northern red oak	70	57	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	100	114	
	Black oak	65	43	
Blocher, hard bedrock substratum	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
JafC3:				
Jennings	Northern red oak	70	57	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, tuliptree, white oak.
	Tuliptree	100	114	
Blocher, hard bedrock substratum	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	
KxkC2:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxkC2:				
Navilleton	---	---	---	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
KxlC3:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxlC3:				
Caneyville	Black oak	65	43	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Chinkapin oak	51	29	
	Scarlet oak	53	43	
KxlE3:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	
Haggatt	Tuliptree	86	86	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxlE3:				
Caneyville	Black oak	65	43	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Chinkapin oak	51	29	
	Eastern redcedar	36	43	
	Scarlet oak	53	43	
KxmE2:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxmE2:				
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	90	86	
	White oak	64	43	
KxoC2:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	
Navilleton	---	---	---	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxoC2:				
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	
KxpD2:				
Knobcreek	Northern red oak	76	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	86	86	
Haggatt	Tuliptree	86	86	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	68	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
KxpD2:				
Caneyville	Black oak	71	57	Black cherry, black oak, blackgum, bur oak, chestnut oak, chinkapin oak, eastern white pine, northern red oak, pignut hickory, scarlet oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	White oak	64	43	
LpoAK:				
Lindside	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
McgC2:				
Markland	Tuliptree	95	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Volume of wood fiber	Trees to plant
			cu ft/ac	
McnGQ:				
Markland	Tuliptree	95	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
McpC3:				
Markland	Tuliptree	95	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
McuDQ:				
Markland	Tuliptree	95	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
MdqDQ:				
Markland	Tuliptree	95	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
MhuA:				
McGary	Sweetgum	80	86	American beech, baldcypress, bitternut hickory, bur oak, cherrybark oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pin oak, shingle oak, Shumard's oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, tuliptree, white oak.
	White oak	70	57	
	Tuliptree	85	86	
MhyA:				
Medora	White oak	90	72	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
MhyB2:				
Medora	White oak	90	72	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Tuliptree	98	100	
MhyC2:				
Medora	White oak	90	72	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	
MhyC3:				
Medora	White oak	75	57	Black oak, blackgum, bur oak, chinkapin oak, eastern white pine, northern red oak, shagbark hickory, shingle oak, tuliptree, white oak.
	Tuliptree	90	86	
MsvA:				
Montgomery	Pin oak	88	72	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, Shumard's oak, silver maple, swamp white oak, sweetgum.
	Sweetgum	90	100	
NaaA:				
Nabb	Northern red oak	80	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	White oak	80	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
NaaB2:				
Nabb	Northern red oak	80	57	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	White oak	80	57	
NbhAK:				
Newark	Pin oak	96	72	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, shingle oak, Shumard's oak, silver maple, swamp chestnut oak, swamp white oak, sweetgum.
	Sweetgum	85	86	
OfbAW:				
Oldenburg	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
PcrB2:				
Pekin	Sugar maple	75	43	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	85	86	
	White oak	70	57	
PcrC2:				
Pekin	White oak	70	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Sugar maple	75	43	
	Tuliptree	85	86	
PcrC3:				
Pekin	White oak	65	43	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	80	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
PhaA:				
Peoga	Pin oak	100	86	American sycamore, baldcypress, blackgum, bur oak, eastern cottonwood, overcup oak, pin oak, red maple, Shumard's oak, silver maple, swamp white oak, sweetgum.
	Sweetgum	90	100	
Pml. Pits, quarry				
Ppu. Pits, sand and gravel				
RblD3:				
Rarden	Black oak	71	57	Black oak, bur oak, chinkapin oak, eastern cottonwood, eastern redcedar, eastern white pine, scarlet oak, shagbark hickory, Virginia pine.
RbmD5:				
Rarden	Black oak	71	57	Black oak, bur oak, chinkapin oak, eastern cottonwood, eastern redcedar, eastern white pine, scarlet oak, shagbark hickory, Virginia pine.
RptG:				
Rohan.				
Jessietown	White oak	60	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Black oak	62	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
RtcA:				
Ryker	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	
RtcB2:				
Ryker	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	
RzrB2:				
Ryker	Tuliptree	98	100	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	White oak	90	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
RztC2:				
Ryker	White oak	90	72	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	
RztC3:				
Ryker	White oak	90	72	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
RztC3:				
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	
RzvC2:				
Ryker	White oak	90	72	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
RzvC3:				
Ryker	White oak	90	72	American beech, black cherry, black oak, black walnut, bur oak, chinkapin oak, eastern white pine, Kentucky coffeetree, northern red oak, Norway spruce, pecan, pignut hickory, shagbark hickory, Shumard's oak, sugar maple, tuliptree, white oak.
	Tuliptree	98	100	
Grayford	White oak	90	72	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	98	100	
SceB2:				
Scottsburg	Northern red oak	70	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	85	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
SfyB:				
Shircliff	Tuliptree	105	114	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
SoaB:				
Spickert	White oak	60	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Tuliptree	100	114	
	Black oak	90	72	
SodB:				
Spickert	Black oak	90	72	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Tuliptree	100	114	
	White oak	60	43	
SolC2:				
Spickert	White oak	60	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Tuliptree	100	114	
	Black oak	90	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
SolC2:				
Wrays	Tuliptree	90	86	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	70	57	
StaAQ:				
Steff	Tuliptree	107	114	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
StdAQ:				
Stendal	Sweetgum	85	86	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.
	Tuliptree	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
StdAW:				
Stendal	Sweetgum	85	86	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, shingle oak, Shumard's oak, silver maple, swamp chestnut oak, swamp white oak, sweetgum.
	Pin oak	90	86	
ThaC2:				
Trappist	White oak	62	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
ThbC3:				
Trappist	Virginia pine	55	86	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
ThbD5:				
Trappist	Virginia pine	52	72	Black oak, bur oak, chinkapin oak, eastern cottonwood, eastern redcedar, eastern white pine, scarlet oak, shagbark hickory, Virginia pine.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
ThcD3:				
Trappist	Virginia pine	55	86	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Rohan	Virginia pine	52	72	---
ThdD:				
Trappist	White oak	62	43	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
	Black oak	68	57	
Rohan	Virginia pine	58	86	---
	Black oak	63	43	
TsaC3:				
Trappist	Virginia pine	55	86	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
Deputy	Northern red oak	71	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
Uaa. Udorthents, cut and filled				
UaoAK: Udifluvents, cut and filled.				
Urban land.				
UedA: Urban land.				
Aquents, clayey substratum.				
UndAY: Urban land.				
Udifluvents.				
UngB: Urban land.				
Udarents, fragipan substratum.				
UnkB: Urban land.				
Udarents, silty substratum.				
UnpA: Urban land.				
Udarents, loamy substratum.				
UnsB: Urban land.				
Udarents, clayey substratum.				
W. Water				

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
WaaAV:				
Wakeland	Pin oak	90	72	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, shingle oak, Shumard's oak, silver maple, swamp chestnut oak, swamp white oak, sweetgum.
	Sweetgum	88	100	
WaaAW:				
Wakeland	Pin oak	90	72	American sycamore, baldcypress, blackgum, bur oak, overcup oak, pecan, pin oak, red maple, river birch, shellbark hickory, shingle oak, Shumard's oak, silver maple, swamp chestnut oak, swamp white oak, sweetgum.
	Sweetgum	88	100	
WedB2:				
Weddel	Northern red oak	70	57	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	Tuliptree	75	57	
	White oak	65	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
WhcD:				
Wellrock	Tuliptree	90	86	American beech, black oak, blackgum, bur oak, cherrybark oak, chestnut oak, common persimmon, eastern white pine, northern red oak, Norway spruce, scarlet oak, shagbark hickory, shingle oak, southern red oak, sugar maple, swamp chestnut oak, tuliptree, white oak.
	White oak	70	57	
Gnawbone	---	---	---	Baldcypress, black oak, blackgum, bur oak, chestnut oak, common persimmon, eastern white pine, scarlet oak, shingle oak, southern red oak, Virginia pine, white oak.
WnmA:				
Whitcomb	White oak	70	57	American beech, American sycamore, baldcypress, bitternut hickory, blackgum, bur oak, cherrybark oak, eastern cottonwood, eastern white pine, northern red oak, Norway spruce, pin oak, shingle oak, silver maple, sugar maple, swamp chestnut oak, swamp white oak, sweetgum, white oak.

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
WokAV:				
Wilbur	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
WokAW:				
Wilbur	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.
WprAW:				
Wirt	---	---	---	Baldcypress, bitternut hickory, black walnut, bur oak, cherrybark oak, Kentucky coffeetree, overcup oak, pecan, pin oak, shellbark hickory, shingle oak, Shumard's oak, swamp chestnut oak, swamp white oak.

Table 10a.--Forestland Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
AddB2:							
Avonburg	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
BbhA:							
Bartle	83	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
BcrAQ:							
Beanblossom	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
BcrAW:							
Beanblossom	89	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
BdoA:							
Bedford	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Wetness	0.50		
BdoB:							
Bedford	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Wetness	0.50		
BfbC2:							
Blocher, soft bedrock substratum	46	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
Weddel	30	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
				Wetness	0.50		
BfcC3:							
Blocher, soft bedrock substratum	49	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
BfcC3:							
Weddel	32	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
				Wetness	0.50		
BnyD3:							
Bonnell	74	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
BobE5:							
Bonnell	45	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Hickory	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
BodAW:							
Bonnie	83	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Wetness	1.00	Flooding	1.00		
		Low strength	0.50	Low strength	0.50		
BvoG:							
Brownstown	39	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Gilwood	38	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
CcaG:							
Caneyville	53	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CldC2:							
Cincinnati	42	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
CldC2:							
Blocher	34	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
CldC3:							
Cincinnati	42	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Wetness	0.50		
				Landslides	0.10		
Blocher	34	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
ClfA:							
Cobbsfork	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Ponding	1.00	Low strength	1.00
				Wetness	0.50		
				Low strength	0.50		
ComC:							
Coolville	71	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
				Wetness	0.50		
ConC3:							
Coolville	45	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
				Wetness	0.50		
Rarden	45	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
				Wetness	0.50		
ConD:							
Coolville	51	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
				Wetness	0.50		
Rarden	30	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
				Wetness	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
CspA:							
Crider	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CspB2:							
Crider	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CtrB2:							
Crider	78	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CtwB:							
Crider	39	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50				
Bedford	29	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Wetness	0.50		
Navilleton	28	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50				
CwaAQ:							
Cuba	92	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
CxgC3:							
Crider	46	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Haggatt	46	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
CxhC2:							
Crider	56	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Haggatt	37	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
CxmC2:							
Crider	52	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Slope	0.50		
				Landslides	0.10		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CxmC2:							
Haggatt-------------	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
CxnC3:							
Crider--------------	44	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Slope	0.50		
				Landslides	0.10		
Haggatt-------------	44	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
DbrG:							
Deam----------------	94	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
DdsAW:							
Dearborn------------	80	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
DfnA:							
Dubois--------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
DtvC2:							
Deputy--------------	50	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Trappist------------	27	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
EbpD2:							
Eden----------------	82	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
EesA:							
Elkinsville---------	52	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Millstone-----------	43	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EesB:							
Elkinsville----------	52	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Millstone-----------	43	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
EesC2:							
Elkinsville----------	44	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Millstone-----------	43	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
EesD2:							
Elkinsville----------	44	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Millstone-----------	44	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
EesFQ:							
Elkinsville----------	48	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Millstone-----------	47	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
EsaG:							
Eden----------------	74	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
GgbG:							
Gilwood-------------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Brownstown----------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GgfD:							
Gilwood-------------	39	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Wrays---------------	38	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
GgfE2:							
Gilwood-------------	42	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
Wrays---------------	36	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
GmaG:							
Gnawbone------------	48	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
Kurtz---------------	32	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	1.00	Landslides	1.00		
		Low strength	0.50	Low strength	0.50		
GyaD2:							
Grayford------------	73	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
GyaD3:							
Grayford------------	78	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
GyaD5:							
Grayford------------	65	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
GykD2:							
Grayford------------	69	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
GykD3:							
Grayford------------	74	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
HcaA:							
Hatfield------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
HccB2:							
Haubstadt-----------	84	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
HcdC2:							
Haubstadt-----------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Shircliff-----------	23	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
HceC3:							
Haubstadt-----------	55	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Shircliff-----------	23	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
HcgAH:							
Haymond-------------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
HcgAV:							
Haymond-------------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
HcgAW:							
Haymond-------------	82	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
HerE:							
Hickory-------------	45	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HerE:							
Bonnell-------------	38	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
HtwD2:							
Haggatt-------------	51	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	31	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
HtzD3:							
Haggatt-------------	51	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	41	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
HufAK:							
Huntington----------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
HuhD2:							
Haggatt-------------	46	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	31	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
HujD3:							
Haggatt-------------	46	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	39	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
JaeB2:							
Jennings------------	80	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
JafC2:							
Jennings	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Blocher, hard bedrock substratum	30	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
JafC3:							
Jennings	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Wetness	0.50		
				Landslides	0.10		
Blocher, hard bedrock substratum	30	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
KxkC2:							
Knobcreek	37	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Stickiness/slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Navilleton	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Stickiness/slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
KxlC3:							
Knobcreek	33	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Stickiness/slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Haggatt	26	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Caneyville	24	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
KxlE3:							
Knobcreek	35	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Stickiness/slope	0.50	Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KxlE3:							
Haggatt-------------	22	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	21	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
KxmE2:							
Knobcreek-----------	33	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Stickiness/slope	0.50	Landslides	0.50		
Haggatt-------------	22	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	20	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
KxoC2:							
Knobcreek-----------	29	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Slope	0.50		
		Landslides	0.10	Landslides	0.10		
Navilleton----------	28	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Slope	0.50		
		Landslides	0.10	Landslides	0.10		
Haggatt-------------	27	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Landslides	0.10	Slope	0.50		
				Landslides	0.10		
KxpD2:							
Knobcreek-----------	35	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Stickiness/slope	0.50	Landslides	0.50		
Haggatt-------------	31	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
		Restrictive layer	0.50	Landslides	0.50		
Caneyville----------	30	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LpoAK:							
Lindside------------	82	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
McgC2:							
Markland------------	74	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
McnGQ:							
Markland------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
McpC3:							
Markland------------	61	Moderate		Moderately suited		Severe	
		Landslides	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
McuDQ:							
Markland------------	70	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
MdqDQ:							
Markland------------	85	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
MhuA:							
McGary--------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
MhyA:							
Medora--------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
MhyB2:							
Medora--------------	88	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
MhyC2:							
Medora--------------	73	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
MhyC3:							
Medora--------------	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Wetness	0.50		
				Landslides	0.10		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MsvA:							
Montgomery----------	82	Severe		Poorly suited		Severe	
		Wetness	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
NaaA:							
Nabb----------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
NaaB2:							
Nabb----------------	78	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
NbhAK:							
Newark--------------	80	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50				
OfbAW:							
Oldenburg-----------	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
PcrB2:							
Pekin---------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
PcrC2:							
Pekin---------------	72	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
PcrC3:							
Pekin---------------	71	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
PhaA:							
Peoga---------------	83	Moderate		Poorly suited		Severe	
		Low strength	0.50	Ponding	1.00	Low strength	1.00
				Wetness	0.50		
				Low strength	0.50		
Pml:							
Pits, quarry--------	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel------------	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden--------------	78	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Slope	0.50	Slope	1.00		
				Low strength	0.50		
				Wetness	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
RbmD5:							
Rarden	74	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Low strength	0.50	Slope	1.00		
				Low strength	0.50		
				Wetness	0.50		
RptG:							
Rohan	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
				Landslides	0.50		
Jessietown	36	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
RtcA:							
Ryker	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
RtcB2:							
Ryker	92	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
RzrB2:							
Ryker	82	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
RztC2:							
Ryker	43	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Stickiness/slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Grayford	25	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
RztC3:							
Ryker	44	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Stickiness/slope	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Grayford	28	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
RzvC2:							
Ryker	41	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Slope	0.50		
		Landslides	0.10	Landslides	0.10		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RzvC2:							
Grayford------------	26	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
RzvC3:							
Ryker---------------	41	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
		Stickiness/slope	0.50	Slope	0.50		
		Landslides	0.10	Landslides	0.10		
Grayford------------	26	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
SceB2:							
Scottsburg----------	96	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
SfyB:							
Shircliff-----------	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
SoaB:							
Spickert------------	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
SodB:							
Spickert------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
SolC2:							
Spickert------------	44	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Wetness	0.50		
				Landslides	0.10		
Wrays---------------	32	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
StaAQ:							
Steff---------------	86	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
StdAQ:							
Stendal-------------	88	Severe		Moderately suited		Severe	
		Wetness	1.00	Low strength	0.50	Low strength	1.00
		Low strength	0.50				

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
StdAW:							
Stendal-------------	87	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	0.50	Low strength	0.50		
		Low strength	0.50				
ThaC2:							
Trappist------------	84	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
ThbC3:							
Trappist------------	75	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
ThbD5:							
Trappist------------	73	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
ThcD3:							
Trappist------------	44	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
Rohan---------------	29	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
ThdD:							
Trappist------------	49	Moderate		Poorly suited		Severe	
		Restrictive layer	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
Rohan---------------	33	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.50	Low strength	0.50		
		Slope	0.50	Landslides	0.50		
TsaC3:							
Trappist------------	46	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
		Landslides	0.10	Landslides	0.10		
Deputy--------------	23	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.10	Low strength	0.50		
				Landslides	0.10		
Uaa:							
Udorthents, cut and filled------------	83	Not rated		Not rated		Not rated	

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
UaoAK:							
Udifluvents, cut and filled	65	Not rated		Not rated		Not rated	
Urban land	25	Not rated		Not rated		Not rated	
UedA:							
Urban land	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land	65	Not rated		Not rated		Not rated	
Udifluvents	25	Not rated		Not rated		Not rated	
UngB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, silty substratum	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum	31	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland	83	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50				
WaaAW:							
Wakeland	82	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50				
WedB2:							
Weddel	95	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhcD:							
Wellrock------------	50	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
				Landslides	0.50		
Gnawbone------------	41	Moderate		Poorly suited		Severe	
		Landslides	0.50	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
WnmA:							
Whitcomb------------	87	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
WokAV:							
Wilbur--------------	78	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
WokAW:							
Wilbur--------------	83	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
WprAW:							
Wirt----------------	83	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 10b.--Forestland Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg	85	Slight		Slight		Moderately suited	
						Low strength	0.50
AddB2:							
Avonburg	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
BbhA:							
Bartle	83	Slight		Slight		Moderately suited	
						Low strength	0.50
BcrAQ:							
Beanblossom	90	Slight		Slight		Moderately suited	
						Low strength	0.50
BcrAW:							
Beanblossom	89	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
BdoA:							
Bedford	90	Slight		Slight		Moderately suited	
						Low strength	0.50
						Wetness	0.50
BdoB:							
Bedford	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
BfbC2:							
Blocher, soft bedrock substratum	46	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
Weddel	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
						Wetness	0.50
BfcC3:							
Blocher, soft bedrock substratum	49	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BfcC3:							
Weddel	32	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
						Wetness	0.50
BnyD3:							
Bonnell	74	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
BobE5:							
Bonnell	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Hickory	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
BodAW:							
Bonnie	83	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Low strength	0.50
BvoG:							
Brownstown	39	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Gilwood	38	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
CcaG:							
Caneyville	53	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
CldC2:							
Cincinnati	42	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CldC2:							
Blocher	34	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
CldC3:							
Cincinnati	42	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10
Blocher	34	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
ClfA:							
Cobbsfork	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
						Low strength	0.50
ComC:							
Coolville	71	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
						Wetness	0.50
ConC3:							
Coolville	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
						Wetness	0.50
Rarden	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
						Wetness	0.50
ConD:							
Coolville	51	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
						Wetness	0.50
Rarden	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
						Wetness	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
CspA:							
Crider	85	Slight		Slight		Moderately suited	
						Low strength	0.50
CspB2:							
Crider	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
CtrB2:							
Crider	78	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
CtwB:							
Crider	39	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
Bedford	29	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
Navilleton	28	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
CwaAQ:							
Cuba	92	Slight		Slight		Moderately suited	
						Low strength	0.50
CxgC3:							
Crider	46	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Haggatt	46	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
CxhC2:							
Crider	56	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Haggatt	37	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
CxmC2:							
Crider	52	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
						Landslides	0.10
Haggatt	35	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CxnC3:							
Crider	44	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
						Landslides	0.10
Haggatt	44	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
DbrG:							
Deam	94	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
DdsAW:							
Dearborn	80	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
DfnA:							
Dubois	85	Slight		Slight		Moderately suited	
						Low strength	0.50
DtvC2:							
Deputy	50	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Trappist	27	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
EbpD2:							
Eden	82	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
EesA:							
Elkinsville	52	Slight		Slight		Moderately suited	
						Low strength	0.50
Millstone	43	Slight		Slight		Moderately suited	
						Low strength	0.50
EesB:							
Elkinsville	52	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
Millstone	43	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
EesC2:							
Elkinsville	44	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Millstone	43	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
EesD2:							
Elkinsville	44	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
Millstone	44	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.10
EesFQ:							
Elkinsville	48	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Millstone	47	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
EsaG:							
Eden	74	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
GgbG:							
Gilwood	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Brownstown	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GgfD:							
Gilwood	39	Slight		Severe		Poorly suited	
				Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Wrays	38	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GgfE2:							
Gilwood------------	42	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Wrays---------------	36	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GmaG:							
Gnawbone------------	48	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
Kurtz---------------	32	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Landslides	1.00
						Low strength	0.50
GyaD2:							
Grayford-----------	73	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GyaD3:							
Grayford-----------	78	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GyaD5:							
Grayford-----------	65	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GykD2:							
Grayford-----------	69	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
GykD3:							
Grayford-----------	74	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
HcaA:							
Hatfield-----------	90	Slight		Slight		Moderately suited	
						Low strength	0.50
HccB2:							
Haubstadt----------	84	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
HcdC2:							
Haubstadt-----------	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Shircliff-----------	23	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
HceC3:							
Haubstadt-----------	55	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Shircliff-----------	23	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
HcgAH:							
Haymond-------------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
HcgAV:							
Haymond-------------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
HcgAW:							
Haymond-------------	82	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
HerE:							
Hickory-------------	45	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Bonnell-------------	38	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
HtwD2:							
Haggatt-------------	51	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	31	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HtzD3:							
Haggatt-------------	51	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	41	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
HufAK:							
Huntington----------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
HuhD2:							
Haggatt-------------	46	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	31	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
HujD3:							
Haggatt-------------	46	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	39	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
JaeB2:							
Jennings------------	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
JafC2:							
Jennings------------	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Blocher, hard bedrock substratum	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
JafC3:							
Jennings------------	45	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
JafC3:							
Blocher, hard bedrock substratum	30	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
KxkC2:							
Knobcreek-----------	37	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Navilleton----------	35	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
KxlC3:							
Knobcreek-----------	33	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Haggatt-------------	26	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Caneyville----------	24	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
KxlE3:							
Knobcreek-----------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Haggatt-------------	22	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	21	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
KxmE2:							
Knobcreek-----------	33	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KxmE2:							
Haggatt-------------	22	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
KxoC2:							
Knobcreek-----------	29	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
						Landslides	0.10
Navilleton----------	28	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
						Landslides	0.10
Haggatt-------------	27	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Low strength	0.50
						Slope	0.50
						Landslides	0.10
KxpD2:							
Knobcreek-----------	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Haggatt-------------	31	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Caneyville----------	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
LpoAK:							
Lindside------------	82	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
McgC2:							
Markland------------	74	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
McnGQ:							
Markland------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
McpC3:							
Markland------------	61	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.50
McuDQ:							
Markland------------	70	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
MdqDQ:							
Markland------------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
MhuA:							
McGary--------------	90	Slight		Slight		Moderately suited	
						Low strength	0.50
MhyA:							
Medora--------------	85	Slight		Slight		Moderately suited	
						Low strength	0.50
MhyB2:							
Medora--------------	88	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
MhyC2:							
Medora--------------	73	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
MhyC3:							
Medora--------------	75	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10
MsvA:							
Montgomery----------	82	Slight		Slight		Poorly suited	
						Ponding	1.00
						Low strength	0.50
NaaA:							
Nabb----------------	85	Slight		Slight		Moderately suited	
						Low strength	0.50
NaaB2:							
Nabb----------------	78	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
NbhAK:							
Newark	80	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
OfbAW:							
Oldenburg	85	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
PcrB2:							
Pekin	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
PcrC2:							
Pekin	72	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
PcrC3:							
Pekin	71	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
PhaA:							
Peoga	83	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
						Low strength	0.50
Pml:							
Pits, quarry	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden	78	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
						Wetness	0.50
RbmD5:							
Rarden	74	Slight		Severe		Poorly suited	
				Slope/erodibility	0.95	Landslides	1.00
						Slope	1.00
						Low strength	0.50
						Wetness	0.50
RptG:							
Rohan	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
RptG:							
Jessietown----------	36	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
RtcA:							
Ryker---------------	95	Slight		Slight		Moderately suited	
						Low strength	0.50
RtcB2:							
Ryker---------------	92	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
RzrB2:							
Ryker---------------	82	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
RztC2:							
Ryker---------------	43	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Grayford------------	25	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
RztC3:							
Ryker---------------	44	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Grayford------------	28	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
RzvC2:							
Ryker---------------	41	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
						Landslides	0.10
Grayford------------	26	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
RzvC3:							
Ryker---------------	41	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Slope	0.50
						Landslides	0.10

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RzvC3:							
Grayford------------	26	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
SceB2:							
Scottsburg----------	96	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
SfyB:							
Shircliff-----------	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
SoaB:							
Spickert------------	95	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
SodB:							
Spickert------------	90	Slight		Slight		Moderately suited	
						Low strength	0.50
						Wetness	0.50
SolC2:							
Spickert------------	44	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Wetness	0.50
						Landslides	0.10
Wrays---------------	32	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
StaAQ:							
Steff---------------	86	Slight		Slight		Moderately suited	
						Low strength	0.50
StdAQ:							
Stendal-------------	88	Slight		Slight		Moderately suited	
						Low strength	0.50
StdAW:							
Stendal-------------	87	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
ThaC2:							
Trappist------------	84	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
ThbC3:							
Trappist	75	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
ThbD5:							
Trappist	73	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
ThcD3:							
Trappist	44	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Rohan	29	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
ThdD:							
Trappist	49	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Rohan	33	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
TsaC3:							
Trappist	46	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Deputy	23	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
						Landslides	0.10
Uaa:							
Udorthents, cut and filled	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled	65	Not rated		Not rated		Not rated	
Urban land	25	Not rated		Not rated		Not rated	
UedA:							
Urban land	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum	25	Not rated		Not rated		Not rated	

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UndAY:							
Urban land----------	65	Not rated		Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated		Not rated	
UngB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land----------	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland------------	83	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
WaaAW:							
Wakeland------------	82	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
WedB2:							
Weddel--------------	95	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
						Wetness	0.50
WhcD:							
Wellrock------------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50
Gnawbone------------	41	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
						Landslides	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WnmA:							
Whitcomb------------	87	Slight		Slight		Moderately suited	
						Low strength	0.50
WokAV:							
Wilbur--------------	78	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
WokAW:							
Wilbur--------------	83	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
WprAW:							
Wirt----------------	83	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50

Table 10c.--Forestland Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
AddA:							
Avonburg------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
AddB2:							
Avonburg------------	75	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BbhA:							
Bartle--------------	83	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BcrAQ:							
Beanblossom---------	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BcrAW:							
Beanblossom---------	89	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BdoA:							
Bedford-------------	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BdoB:							
Bedford-------------	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BfbC2:							
Blocher, soft bedrock substratum	46	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Weddel--------------	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
BfcC3:							
Blocher, soft bedrock substratum	49	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
Weddel--------------	32	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
BnyD3:							
Bonnell-------------	74	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
BobE5:							
Bonnell	45	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
Hickory	30	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
BodAW:							
Bonnie	83	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
BvoG:							
Brownstown	39	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Gilwood	38	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
CcaG:							
Caneyville	53	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CldC2:							
Cincinnati	42	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Blocher	34	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
CldC3:							
Cincinnati	42	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Blocher	34	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
ClfA:							
Cobbsfork	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
ComC:							
Coolville	71	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
ConC3:							
Coolville-----------	45	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Rarden--------------	45	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
ConD:							
Coolville-----------	51	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
Rarden--------------	30	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
CspA:							
Crider--------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CspB2:							
Crider--------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CtrB2:							
Crider--------------	78	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CtwB:							
Crider--------------	39	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Bedford-------------	29	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Navilleton----------	28	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CwaAQ:							
Cuba----------------	92	Well suited		Well suited		Moderately suited	
						Low strength	0.50
CxgC3:							
Crider--------------	46	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt-------------	46	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
CxhC2:							
Crider	56	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt	37	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
CxmC2:							
Crider	52	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt	35	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
CxnC3:							
Crider	44	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt	44	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
DbrG:							
Deam	94	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
DdsAW:							
Dearborn	80	Well suited		Well suited		Moderately suited	
						Low strength	0.50
DfnA:							
Dubois	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
DtvC2:							
Deputy	50	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Trappist	27	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
EbpD2:							
Eden	82	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
		Rock fragments	0.50	Stickiness; high plasticity index	0.75		
				Rock fragments	0.50		
EesA:							
Elkinsville	52	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Millstone	43	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
EesB:							
Elkinsville----------	52	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Millstone-----------	43	Well suited		Well suited		Moderately suited	
						Low strength	0.50
EesC2:							
Elkinsville----------	44	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Millstone-----------	43	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
EesD2:							
Elkinsville----------	44	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Millstone-----------	44	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
EesFQ:							
Elkinsville----------	48	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
Millstone-----------	47	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
						Low strength	0.50
EsaG:							
Eden----------------	74	Poorly suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.75	Slope	1.00	Slope	1.00
				Stickiness; high plasticity index	0.75	Low strength	0.50
		Slope	0.50				
		Rock fragments	0.50	Rock fragments	0.50		
GgbG:							
Gilwood-------------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Brownstown----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
GgfD:							
Gilwood-------------	39	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
Wrays---------------	38	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
GgfE2:							
Gilwood-------------	42	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Wrays---------------	36	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
GmaG:							
Gnawbone------------	48	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Kurtz---------------	32	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
						Low strength	0.50
GyaD2:							
Grayford------------	73	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
GyaD3:							
Grayford------------	78	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
GyaD5:							
Grayford------------	65	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
GykD2:							
Grayford------------	69	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
GykD3:							
Grayford------------	74	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
HcaA:							
Hatfield------------	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HccB2:							
Haubstadt-----------	84	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HcdC2:							
Haubstadt-----------	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Shircliff-----------	23	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
HceC3:							
Haubstadt-----------	55	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
HceC3:							
Shircliff-----------	23	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
HcgAH:							
Haymond-------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HcgAV:							
Haymond-------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HcgAW:							
Haymond-------------	82	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HerE:							
Hickory-------------	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Bonnell-------------	38	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
HtwD2:							
Haggatt-------------	51	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Caneyville----------	31	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
HtzD3:							
Haggatt-------------	51	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
Caneyville----------	41	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
HufAK:							
Huntington----------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
HuhD2:							
Haggatt-------------	46	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Caneyville----------	31	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
HujD3:							
Haggatt-------------	46	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
Caneyville----------	39	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
JaeB2:							
Jennings------------	80	Well suited		Well suited		Moderately suited	
						Low strength	0.50
JafC2:							
Jennings------------	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Blocher, hard bedrock substratum	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
JafC3:							
Jennings------------	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Blocher, hard bedrock substratum	30	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
KxkC2:							
Knobcreek-----------	37	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Navilleton----------	35	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
KxlC3:							
Knobcreek-----------	33	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt-------------	26	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
Caneyville----------	24	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
				Slope	0.50		
KxlE3:							
Knobcreek-----------	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
KxlE3:							
Haggatt-------------	22	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
Caneyville----------	21	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
KxmE2:							
Knobcreek-----------	33	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Haggatt-------------	22	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Caneyville----------	20	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
KxoC2:							
Knobcreek-----------	29	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Navilleton----------	28	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Haggatt-------------	27	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
KxpD2:							
Knobcreek-----------	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Haggatt-------------	31	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Caneyville----------	30	Poorly suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.75	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.75		
LpoAK:							
Lindside------------	82	Well suited		Well suited		Moderately suited	
						Low strength	0.50
McgC2:							
Markland------------	74	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
McnGQ:							
Markland------------	90	Moderately suited		Unsuited		Poorly suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
McpC3:							
Markland------------	61	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Stickiness; high plasticity index Slope	 0.50 0.50	Moderately suited Low strength	 0.50
McuDQ:							
Markland------------	70	Moderately suited Stickiness; high plasticity index	 0.50	Poorly suited Slope Stickiness; high plasticity index	 0.75 0.50	Moderately suited Low strength	 0.50
MdqDQ:							
Markland------------	85	Moderately suited Stickiness; high plasticity index	 0.50	Poorly suited Slope Stickiness; high plasticity index	 0.75 0.50	Moderately suited Low strength	 0.50
MhuA:							
McGary--------------	90	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Low strength	 0.50
MhyA:							
Medora--------------	85	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Low strength	 0.50
MhyB2:							
Medora--------------	88	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Low strength	 0.50
MhyC2:							
Medora--------------	73	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Slope Stickiness; high plasticity index	 0.50 0.50	Moderately suited Low strength	 0.50
MhyC3:							
Medora--------------	75	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Slope Stickiness; high plasticity index	 0.50 0.50	Moderately suited Low strength	 0.50
MsvA:							
Montgomery----------	82	Moderately suited Stickiness; high plasticity index	 0.50	Moderately suited Stickiness; high plasticity index	 0.50	Poorly suited Wetness Low strength	 1.00 0.50
NaaA:							
Nabb----------------	85	Well suited		Well suited		Moderately suited Low strength	 0.50
NaaB2:							
Nabb----------------	78	Well suited		Well suited		Moderately suited Low strength	 0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
NbhAK:							
Newark	80	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
OfbAW:							
Oldenburg	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
PcrB2:							
Pekin	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
PcrC2:							
Pekin	72	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
PcrC3:							
Pekin	71	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
PhaA:							
Peoga	83	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Pml:							
Pits, quarry	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden	78	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50		
RbmD5:							
Rarden	74	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
RptG:							
Rohan	45	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Low strength	0.50
Jessietown	36	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
RtcA:							
Ryker	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RtcB2:							
Ryker	92	Well suited		Well suited		Moderately suited	
						Low strength	0.50
RzrB2:							
Ryker	82	Well suited		Well suited		Moderately suited	
						Low strength	0.50
RztC2:							
Ryker	43	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Grayford	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
RztC3:							
Ryker	44	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Grayford	28	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
RzvC2:							
Ryker	41	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Grayford	26	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
RzvC3:							
Ryker	41	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Grayford	26	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
SceB2:							
Scottsburg	96	Well suited		Well suited		Moderately suited	
						Low strength	0.50
SfyB:							
Shircliff	75	Well suited		Well suited		Moderately suited	
						Low strength	0.50
SoaB:							
Spickert	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50
SodB:							
Spickert	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
SolC2:							
Spickert	44	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Wrays	32	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
StaAQ:							
Steff	86	Well suited		Well suited		Moderately suited	
						Low strength	0.50
StdAQ:							
Stendal	88	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
StdAW:							
Stendal	87	Well suited		Well suited		Moderately suited	
						Wetness	0.50
						Low strength	0.50
ThaC2:							
Trappist	84	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
ThbC3:							
Trappist	75	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
ThbD5:							
Trappist	73	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
ThcD3:							
Trappist	44	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Rohan	29	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75		
ThdD:							
Trappist	49	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Rohan	33	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75		
TsaC3:							
Trappist	46	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Deputy	23	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Uaa:							
Udorthents, cut and filled	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled	65	Not rated		Not rated		Not rated	
Urban land	25	Not rated		Not rated		Not rated	

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
UedA:							
Urban land----------	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land----------	65	Not rated		Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated		Not rated	
UngB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land----------	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland-----------	83	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
WaaAW:							
Wakeland-----------	82	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
WedB2:							
Weddel-------------	95	Well suited		Well suited		Moderately suited	
						Low strength	0.50
WhcD:							
Wellrock-----------	50	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 10c.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
WhcD:							
Gnawbone	41	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
WnmA:							
Whitcomb	87	Well suited		Well suited		Moderately suited	
						Low strength	0.50
WokAV:							
Wilbur	78	Well suited		Well suited		Moderately suited	
						Low strength	0.50
WokAW:							
Wilbur	83	Well suited		Well suited		Moderately suited	
						Low strength	0.50
WprAW:							
Wirt	83	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 10d.--Forestland Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
AddA:			
Avonburg	85	High	
		Wetness	1.00
AddB2:			
Avonburg	75	High	
		Wetness	1.00
BbhA:			
Bartle	83	High	
		Wetness	1.00
BcrAQ:			
Beanblossom	90	Low	
BcrAW:			
Beanblossom	89	Low	
BdoA:			
Bedford	90	Low	
BdoB:			
Bedford	90	Low	
BfbC2:			
Blocher, soft bedrock substratum	46	Low	
Weddel	30	Low	
BfcC3:			
Blocher, soft bedrock substratum	49	Low	
Weddel	32	Moderate	
		Wetness	0.50
BnyD3:			
Bonnell	74	Low	
BobE5:			
Bonnell	45	Low	
Hickory	30	Low	
BodAW:			
Bonnie	83	High	
		Wetness	1.00

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
BvoG:			
Brownstown	39	Low	
Gilwood	38	Low	
CcaG:			
Caneyville	53	Low	
Rock outcrop	15	Not rated	
CkkB2:			
Cincinnati	80	Low	
CldC2:			
Cincinnati	42	Low	
Blocher	34	Low	
CldC3:			
Cincinnati	42	High	
		Wetness	1.00
Blocher	34	Low	
ClfA:			
Cobbsfork	85	High	
		Wetness	1.00
ComC:			
Coolville	71	Moderate	
		Wetness	0.50
		Soil reaction	0.50
ConC3:			
Coolville	45	Moderate	
		Wetness	0.50
		Soil reaction	0.50
Rarden	45	High	
		Wetness	1.00
		Soil reaction	0.50
ConD:			
Coolville	51	Moderate	
		Wetness	0.50
		Soil reaction	0.50
Rarden	30	High	
		Wetness	1.00
		Soil reaction	0.50
CspA:			
Crider	85	Low	
CspB2:			
Crider	85	Low	
CtrB2:			
Crider	78	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
CtwB:			
Crider	39	Low	
Bedford	29	Low	
Navilleton	28	Low	
CwaAQ:			
Cuba	92	Low	
CxgC3:			
Crider	46	Low	
Haggatt	46	Low	
CxhC2:			
Crider	56	Low	
Haggatt	37	Low	
CxmC2:			
Crider	52	Low	
Haggatt	35	Low	
CxnC3:			
Crider	44	Low	
Haggatt	44	Low	
DbrG:			
Deam	94	Moderate	
		Soil reaction	0.50
DdsAW:			
Dearborn	80	Moderate	
		Carbonate content	0.50
DfnA:			
Dubois	85	Moderate	
		Wetness	0.50
DtvC2:			
Deputy	50	Low	
Trappist	27	Low	
EbpD2:			
Eden	82	Low	
EesA:			
Elkinsville	52	Low	
Millstone	43	Low	
EesB:			
Elkinsville	52	Low	
Millstone	43	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
EesC2:			
Elkinsville---------	44	Low	
Millstone----------	43	Low	
EesD2:			
Elkinsville---------	44	Moderate	
		Available water	0.50
Millstone----------	44	Moderate	
		Available water	0.50
EesFQ:			
Elkinsville---------	48	Moderate	
		Available water	0.50
Millstone----------	47	Moderate	
		Available water	0.50
EsaG:			
Eden----------------	74	Low	
GgbG:			
Gilwood-------------	45	Low	
Brownstown----------	35	Low	
GgfD:			
Gilwood-------------	39	Low	
Wrays---------------	38	Low	
GgfE2:			
Gilwood-------------	42	Low	
Wrays---------------	36	Low	
GmaG:			
Gnawbone------------	48	Moderate	
		Soil reaction	0.50
Kurtz---------------	32	Moderate	
		Soil reaction	0.50
GyaD2:			
Grayford------------	73	Low	
GyaD3:			
Grayford------------	78	Low	
GyaD5:			
Grayford------------	65	Low	
GykD2:			
Grayford------------	69	Low	
GykD3:			
Grayford------------	74	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
HcaA:			
Hatfield------------	90	High	
		Wetness	1.00
HccB2:			
Haubstadt-----------	84	Low	
HcdC2:			
Haubstadt-----------	55	Low	
Shircliff-----------	23	Low	
HceC3:			
Haubstadt-----------	55	Moderate	
		Wetness	0.50
Shircliff-----------	23	Low	
HcgAH:			
Haymond-------------	85	Low	
HcgAV:			
Haymond-------------	85	Low	
HcgAW:			
Haymond-------------	82	Low	
HerE:			
Hickory-------------	45	Low	
Bonnell-------------	38	Low	
HtwD2:			
Haggatt-------------	51	Low	
Caneyville----------	31	Low	
HtzD3:			
Haggatt-------------	51	Low	
Caneyville----------	41	Low	
HufAK:			
Huntington----------	85	Low	
HuhD2:			
Haggatt-------------	46	Low	
Caneyville----------	31	Low	
HujD3:			
Haggatt-------------	46	Low	
Caneyville----------	39	Low	
JaeB2:			
Jennings------------	80	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality	
		Rating class and limiting features	Value
JafC2:			
Jennings	45	Low	
Blocher, hard bedrock substratum	30	Low	
JafC3:			
Jennings	45	Low	
Blocher, hard bedrock substratum	30	Low	
KxkC2:			
Knobcreek	37	Low	
Navilleton	35	Low	
KxlC3:			
Knobcreek	33	Low	
Haggatt	26	Low	
Caneyville	24	Low	
KxlE3:			
Knobcreek	35	Low	
Haggatt	22	Low	
Caneyville	21	Low	
KxmE2:			
Knobcreek	33	Low	
Haggatt	22	Low	
Caneyville	20	Low	
KxoC2:			
Knobcreek	29	Low	
Navilleton	28	Low	
Haggatt	27	Low	
KxpD2:			
Knobcreek	35	Low	
Haggatt	31	Low	
Caneyville	30	Low	
LpoAK:			
Lindside	82	Low	
McgC2:			
Markland	74	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
McnGQ:			
Markland	90	Low	
McpC3:			
Markland	61	Low	
McuDQ:			
Markland	70	Low	
MdqDQ:			
Markland	85	Low	
MhuA:			
McGary	90	High	
		Wetness	1.00
MhyA:			
Medora	85	Low	
MhyB2:			
Medora	88	Low	
MhyC2:			
Medora	73	Low	
MhyC3:			
Medora	75	High	
		Wetness	1.00
MsvA:			
Montgomery	82	High	
		Wetness	1.00
NaaA:			
Nabb	85	Low	
NaaB2:			
Nabb	78	Low	
NbhAK:			
Newark	80	High	
		Wetness	1.00
OfbAW:			
Oldenburg	85	Low	
PcrB2:			
Pekin	85	Low	
PcrC2:			
Pekin	72	Low	
PcrC3:			
Pekin	71	High	
		Wetness	1.00
PhaA:			
Peoga	83	High	
		Wetness	1.00

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality	
		Rating class and limiting features	Value
Pml:			
Pits, quarry	85	Not rated	
Ppu:			
Pits, sand and gravel	80	Not rated	
RblD3:			
Rarden	78	Moderate	
		Wetness	0.50
		Soil reaction	0.50
RbmD5:			
Rarden	74	Moderate	
		Wetness	0.50
		Soil reaction	0.50
RptG:			
Rohan	45	Low	
Jessietown	36	Low	
RtcA:			
Ryker	95	Low	
RtcB2:			
Ryker	92	Low	
RzrB2:			
Ryker	82	Low	
RztC2:			
Ryker	43	Low	
Grayford	25	Low	
RztC3:			
Ryker	44	Low	
Grayford	28	Low	
RzvC2:			
Ryker	41	Low	
Grayford	26	Low	
RzvC3:			
Ryker	41	Low	
Grayford	26	Low	
SceB2:			
Scottsburg	96	Low	
SfyB:			
Shircliff	75	Low	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
SoaB:			
Spickert	95	Low	
SodB:			
Spickert	90	Low	
SolC2:			
Spickert	44	Low	
Wrays	32	Low	
StaAQ:			
Steff	86	Low	
StdAQ:			
Stendal	88	High	
		Wetness	1.00
StdAW:			
Stendal	87	Moderate	
		Wetness	0.50
ThaC2:			
Trappist	84	Low	
ThbC3:			
Trappist	75	Low	
ThbD5:			
Trappist	73	Low	
ThcD3:			
Trappist	44	Low	
Rohan	29	Low	
ThdD:			
Trappist	49	Low	
Rohan	33	Low	
TsaC3:			
Trappist	46	Low	
Deputy	23	Low	
Uaa:			
Udorthents, cut and filled	83	Not rated	
UaoAK:			
Udifluvents, cut and filled	65	Not rated	
Urban land	25	Not rated	
UedA:			
Urban land	60	Not rated	

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality: Rating class and limiting features	Value
UedA:			
Aquents, clayey substratum	25	Not rated	
UndAY:			
Urban land	65	Not rated	
Udifluvents	25	Not rated	
UngB:			
Urban land	45	Not rated	
Udarents, fragipan substratum	30	Not rated	
UnkB:			
Urban land	45	Not rated	
Udarents, silty substratum	30	Not rated	
UnpA:			
Urban land	45	Not rated	
Udarents, loamy substratum	30	Not rated	
UnsB:			
Urban land	41	Not rated	
Udarents, clayey substratum	31	Not rated	
W:			
Water	100	Not rated	
WaaAV:			
Wakeland	83	High	
		Wetness	1.00
WaaAW:			
Wakeland	82	High	
		Wetness	1.00
WedB2:			
Weddel	95	Low	
WhcD:			
Wellrock	50	Moderate	
		Soil reaction	0.50
Gnawbone	41	Moderate	
		Soil reaction	0.50
WnmA:			
Whitcomb	87	Moderate	
		Wetness	0.50
		Soil reaction	0.50

Table 10d.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Potential for seedling mortality	
		Rating class and limiting features	Value
WokAV:			
Wilbur	78	Low	
WokAW:			
Wilbur	83	Low	
WprAW:			
Wirt	83	Low	

Table 11a.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
AddB2:							
Avonburg------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
						Slope	0.15
BbhA:							
Bartle--------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
BcrAQ:							
Beanblossom---------	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
BcrAW:							
Beanblossom---------	89	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
BdoA:							
Bedford-------------	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
BdoB:							
Bedford-------------	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.55
BfbC2:							
Blocher, soft bedrock substratum	46	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
BfbC2:							
Weddel	30	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.88	Slope	1.00
		Slow water movement	0.88	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Slow water movement	0.88
BfcC3:							
Blocher, soft bedrock substratum	49	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
Weddel	32	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.88
BnyD3:							
Bonnell	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
BobE5:							
Bonnell	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
Hickory	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
BodAW:							
Bonnie	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.21	Flooding	0.60
		Slow water movement	0.21			Slow water movement	0.21
BvoG:							
Brownstown	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
Gilwood	38	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.29
						Gravel content	0.22

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
CcaG:							
Caneyville	53	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
						Depth to bedrock	0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
						Slope	0.55
CldC2:							
Cincinnati	42	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
Blocher	34	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.96
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
CldC3:							
Cincinnati	42	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slow water movement	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Depth to saturated zone	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	1.00
Blocher	34	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
ClfA:							
Cobbsfork	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
ComC:							
Coolville	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.98

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
ConC3:							
Coolville	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.98
Rarden	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.98
						Depth to bedrock	0.03
ConD:							
Coolville	51	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slow water movement	0.98
Rarden	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slow water movement	0.98
						Depth to bedrock	0.06
CspA:							
Crider	85	Not limited		Not limited		Not limited	
CspB2:							
Crider	85	Not limited		Not limited		Somewhat limited	
						Slope	0.55
CtrB2:							
Crider	78	Not limited		Not limited		Somewhat limited	
						Slope	0.28
CtwB:							
Crider	39	Not limited		Not limited		Somewhat limited	
						Slope	0.55
Bedford	29	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.55
Navilleton	28	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.55

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
CwaAQ:							
Cuba	92	Very limited		Not limited		Not limited	
		Flooding	1.00				
CxgC3:							
Crider	46	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Haggatt	46	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
CxhC2:							
Crider	56	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Haggatt	37	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
CxmC2:							
Crider	52	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Haggatt	35	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
CxnC3:							
Crider	44	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Haggatt	44	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
DbrG:							
Deam	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slow water movement	0.98
						Depth to bedrock	0.06
DdsAW:							
Dearborn	80	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
DfnA:							
Dubois	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
DtvC2:							
Deputy---------------	50	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.96	Slope	1.00
		Slow water movement	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Slow water movement	0.96
Trappist------------	27	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
						Depth to bedrock	0.35
EbpD2:							
Eden-----------------	82	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.95
EesA:							
Elkinsville----------	52	Not limited		Not limited		Not limited	
Millstone------------	43	Not limited		Not limited		Not limited	
EesB:							
Elkinsville----------	52	Not limited		Not limited		Somewhat limited	
						Slope	0.55
Millstone------------	43	Not limited		Not limited		Somewhat limited	
						Slope	0.55
EesC2:							
Elkinsville----------	44	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Millstone------------	43	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
EesD2:							
Elkinsville----------	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Millstone------------	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
EesFQ:							
Elkinsville----------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00				
Millstone------------	47	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00				

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
EsaG:							
Eden----------------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.01
GgbG:							
Gilwood-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.29
						Gravel content	0.22
Brownstown----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
GgfD:							
Gilwood-------------	39	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
						Depth to bedrock	0.29
Wrays---------------	38	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
GgfE2:							
Gilwood-------------	42	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.29
Wrays---------------	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
GmaG:							
Gnawbone------------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.01
Kurtz---------------	32	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
GyaD2:							
Grayford------------	73	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
GyaD3:							
Grayford------------	78	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
GyaD5:							
Grayford------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
GykD2:							
Grayford-----------	69	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
GykD3:							
Grayford-----------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
HcaA:							
Hatfield-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
HccB2:							
Haubstadt----------	84	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.55
HcdC2:							
Haubstadt----------	55	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slow water movement	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.98
Shircliff----------	23	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.96	Slope	1.00
		Slow water movement	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.37	Slope	0.37	Slow water movement	0.96
HceC3:							
Haubstadt----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	1.00
Shircliff----------	23	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.96	Slope	1.00
		Slow water movement	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.37	Slope	0.37	Slow water movement	0.96
HcgAH:							
Haymond------------	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HcgAV:							
Haymond-------------	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
HcgAW:							
Haymond-------------	82	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
HerE:							
Hickory-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Bonnell-------------	38	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.04	Slow water movement	0.04	Slow water movement	0.04
HtwD2:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	31	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Depth to bedrock	0.46
						Slow water movement	0.21
HtzD3:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	41	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Depth to bedrock	0.90
						Slow water movement	0.21
HufAK:							
Huntington----------	85	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
HuhD2:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	31	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
						Depth to bedrock	0.06

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
HujD3:							
Haggatt	46	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Depth to bedrock	0.90
						Slow water movement	0.21
JaeB2:							
Jennings	80	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
						Slope	0.55
JafC2:							
Jennings	45	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	1.00
Blocher, hard bedrock substratum	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
JafC3:							
Jennings	45	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slow water movement	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.98
Blocher, hard bedrock substratum	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
KxkC2:							
Knobcreek	37	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.84	Slow water movement	0.84	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.84
Navilleton	35	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
KxlC3:							
Knobcreek-----------	33	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.84	Slow water movement	0.84	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.84
Haggatt-------------	26	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
Caneyville----------	24	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to bedrock	0.90
						Slow water movement	0.21
KxlE3:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.84	Slow water movement	0.84	Slow water movement	0.84
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	21	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Depth to bedrock	0.90
						Slow water movement	0.21
KxmE2:							
Knobcreek-----------	33	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.84	Slow water movement	0.84	Slow water movement	0.84
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
						Depth to bedrock	0.06
KxoC2:							
Knobcreek-----------	29	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.84	Slow water movement	0.84	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.84

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
KxoC2:							
Navilleton----------	28	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
Haggatt------------	27	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21
KxpD2:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.84	Slow water movement	0.84	Slow water movement	0.84
Haggatt------------	31	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Caneyville----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
						Depth to bedrock	0.06
LpoAK:							
Lindside-----------	82	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98			Flooding	0.60
McgC2:							
Markland-----------	74	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.43
McnGQ:							
Markland-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43				
McpC3:							
Markland-----------	61	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.43
McuDQ:							
Markland-----------	70	Very limited		Very limited		Very limited	
		Flooding	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43				

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
MdqDQ:							
Markland------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Slow water movement	0.43	Slow water movement	0.43
		Slow water movement	0.43				
MhuA:							
McGary--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
MhyA:							
Medora--------------	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.88	Depth to saturated zone	0.56	Depth to saturated zone	0.88
MhyB2:							
Medora--------------	88	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.88	Depth to saturated zone	0.56	Depth to saturated zone	0.88
						Slope	0.55
MhyC2:							
Medora--------------	73	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.88	Depth to saturated zone	0.56	Slow water movement	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.88
MhyC3:							
Medora--------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	1.00
MsvA:							
Montgomery----------	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
NaaA:							
Nabb----------------	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
NaaB2:							
Nabb----------------	78	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.55
NbhAK:							
Newark--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
OfbAW:							
Oldenburg-----------	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98			Flooding	0.60
PcrB2:							
Pekin---------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Slow water movement	0.88	Depth to saturated zone	0.98
		Slow water movement	0.88	Depth to saturated zone	0.75	Slow water movement	0.88
						Slope	0.55
PcrC2:							
Pekin---------------	72	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.88	Slope	1.00
		Slow water movement	0.88	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Slow water movement	0.88
PcrC3:							
Pekin---------------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.88
PhaA:							
Peoga---------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
Pml:							
Pits, quarry--------	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel------------	80	Not rated		Not rated		Not rated	

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RblD3:							
Rarden	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.98	Slow water movement	0.98	Slow water movement	0.98
						Depth to bedrock	0.29
RbmD5:							
Rarden	74	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Too clayey	1.00	Slope	1.00
		Slow water movement	0.98	Slow water movement	0.98	Too clayey	1.00
		Slope	0.84	Slope	0.84	Slow water movement	0.98
						Depth to bedrock	0.80
RptG:							
Rohan	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.27	Gravel content	0.27	Gravel content	1.00
Jessietown	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
RtcA:							
Ryker	95	Not limited		Not limited		Not limited	
RtcB2:							
Ryker	92	Not limited		Not limited		Somewhat limited	
						Slope	0.55
RzrB2:							
Ryker	82	Not limited		Not limited		Somewhat limited	
						Slope	0.28
RztC2:							
Ryker	43	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Grayford	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
RztC3:							
Ryker	44	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Grayford	28	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
RzvC2:							
Ryker	41	Not limited		Not limited		Very limited	
						Slope	1.00

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RzvC2:							
Grayford-----------	26	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
RzvC3:							
Ryker---------------	41	Not limited		Not limited		Very limited	
						Slope	1.00
Grayford-----------	26	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
SceB2:							
Scottsburg----------	96	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Slow water movement	0.88	Depth to saturated zone	0.98
		Slow water movement	0.88	Depth to saturated zone	0.75	Slow water movement	0.88
						Slope	0.15
SfyB:							
Shircliff-----------	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slow water movement	0.43	Slow water movement	0.43	Slope	0.55
						Slow water movement	0.43
SoaB:							
Spickert------------	95	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.55
SodB:							
Spickert------------	90	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
						Slope	0.03
SolC2:							
Spickert------------	44	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slow water movement	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.98
Wrays---------------	32	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.21

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
StaAQ:							
Steff	86	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98				
StdAQ:							
Stendal	88	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00				
StdAW:							
Stendal	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
ThaC2:							
Trappist	84	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
						Depth to bedrock	0.35
ThbC3:							
Trappist	75	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
						Depth to bedrock	0.90
ThbD5:							
Trappist	73	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slope	0.84	Slope	0.84	Slope	1.00
						Depth to bedrock	0.46
ThcD3:							
Trappist	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.71
Rohan	29	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.39	Gravel content	0.39	Gravel content	1.00
ThdD:							
Trappist	49	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Depth to bedrock	0.10

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
ThdD:							
Rohan	33	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
TsaC3:							
Trappist	46	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.04	Slope	0.04	Slow water movement	0.96
						Depth to bedrock	0.90
Deputy	23	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.98	Slow water movement	0.96	Slope	1.00
		Slow water movement	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Slow water movement	0.96
Uaa:							
Udorthents, cut and filled	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled	65	Not rated		Not rated		Not rated	
Urban land	25	Not rated		Not rated		Not rated	
UedA:							
Urban land	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land	65	Not rated		Not rated		Not rated	
Udifluvents	25	Not rated		Not rated		Not rated	
UngB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, silty substratum	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum	30	Not rated		Not rated		Not rated	

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
UnsB:							
Urban land	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum	31	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
WaaAW:							
Wakeland	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
WedB2:							
Weddel	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Slow water movement	0.96	Depth to saturated zone	0.98
		Slow water movement	0.96	Depth to saturated zone	0.75	Slow water movement	0.96
						Slope	0.55
WhcD:							
Wellrock	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
Gnawbone	41	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
						Depth to bedrock	0.01
WnmA:							
Whitcomb	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.88	Slow water movement	0.88	Slow water movement	0.88
WokAV:							
Wilbur	78	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
		Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98

Table 11a.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
WokAW:							
Wilbur	83	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98			Flooding	0.60
WprAW:							
Wirt	83	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60

Table 11b.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
AddB2:							
Avonburg------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BbhA:							
Bartle--------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BcrAQ:							
Beanblossom---------	90	Not limited		Not limited		Not limited	
BcrAW:							
Beanblossom---------	89	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
BdoA:							
Bedford-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
BdoB:							
Bedford-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
BfbC2:							
Blocher, soft bedrock substratum	46	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Weddel--------------	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
BfcC3:							
Blocher, soft bedrock substratum	49	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Weddel--------------	32	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
BnyD3:							
Bonnell	74	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
BobE5:							
Bonnell	45	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
Hickory	30	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
BodAW:							
Bonnie	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
						Flooding	0.60
BvoG:							
Brownstown	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
						Droughty	0.01
Gilwood	38	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
						Depth to bedrock	0.29
CcaG:							
Caneyville	53	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Not limited		Not limited		Not limited	
CldC2:							
Cincinnati	42	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.19
						Slope	0.04
Blocher	34	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.19
						Slope	0.04
CldC3:							
Cincinnati	42	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.96
		Depth to saturated zone	0.92	Depth to saturated zone	0.92	Slope	0.04
Blocher	34	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
ClfA:							
Cobbsfork-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
ComC:							
Coolville-----------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
ConC3:							
Coolville-----------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Rarden--------------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
						Depth to bedrock	0.03
ConD:							
Coolville-----------	51	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01				
Rarden--------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01			Depth to bedrock	0.06
CspA:							
Crider--------------	85	Not limited		Not limited		Not limited	
CspB2:							
Crider--------------	85	Not limited		Not limited		Not limited	
CtrB2:							
Crider--------------	78	Not limited		Not limited		Not limited	
CtwB:							
Crider--------------	39	Not limited		Not limited		Not limited	
Bedford-------------	29	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
Navilleton----------	28	Not limited		Not limited		Not limited	
CwaAQ:							
Cuba----------------	92	Not limited		Not limited		Not limited	

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
CxgC3:							
Crider	46	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Haggatt	46	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
CxhC2:							
Crider	56	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Haggatt	37	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
CxmC2:							
Crider	52	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Haggatt	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
CxnC3:							
Crider	44	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Haggatt	44	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
DbrG:							
Deam	94	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.96	Depth to bedrock	0.06
DdsAW:							
Dearborn	80	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
DfnA:							
Dubois	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
DtvC2:							
Deputy	50	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
Trappist	27	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.35
						Slope	0.04
EbpD2:							
Eden	82	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Depth to bedrock	0.95
						Droughty	0.45

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
EesA:							
Elkinsville---------	52	Not limited		Not limited		Not limited	
Millstone-----------	43	Not limited		Not limited		Not limited	
EesB:							
Elkinsville---------	52	Not limited		Not limited		Not limited	
Millstone-----------	43	Not limited		Not limited		Not limited	
EesC2:							
Elkinsville---------	44	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Millstone-----------	43	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
EesD2:							
Elkinsville---------	44	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01				
Millstone-----------	44	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01				
EesFQ:							
Elkinsville---------	48	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.14		
Millstone-----------	47	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.14		
EsaG:							
Eden----------------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Large stones	0.16
						Depth to bedrock	0.01
GgbG:							
Gilwood-------------	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.96	Slope	1.00
						Depth to bedrock	0.29
Brownstown----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
						Droughty	0.01
GgfD:							
Gilwood-------------	39	Not limited		Not limited		Somewhat limited	
						Slope	0.84
						Depth to bedrock	0.29
Wrays---------------	38	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
GgfE2:							
Gilwood	42	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Depth to bedrock	0.29
Wrays	36	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01				
GmaG:							
Gnawbone	48	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	0.01
Kurtz	32	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.78		
GyaD2:							
Grayford	73	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
GyaD3:							
Grayford	78	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
GyaD5:							
Grayford	65	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
GykD2:							
Grayford	69	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
GykD3:							
Grayford	74	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
HcaA:							
Hatfield	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
HccB2:							
Haubstadt	84	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
HcdC2:							
Haubstadt	55	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
HcdC2:							
Shircliff-----------	23	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.37
HceC3:							
Haubstadt-----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Shircliff-----------	23	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.37
HcgAH:							
Haymond-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
HcgAV:							
Haymond-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
HcgAW:							
Haymond-------------	82	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
HerE:							
Hickory-------------	45	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
Bonnell-------------	38	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01				
HtwD2:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
Caneyville----------	31	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.32			Depth to bedrock	0.46
HtzD3:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
Caneyville----------	41	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.47
						Large stones	0.01

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
HufAK:							
Huntington----------	85	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
HuhD2:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
Caneyville----------	31	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.32			Depth to bedrock	0.06
HujD3:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
Caneyville----------	39	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.32			Depth to bedrock	0.90
						Droughty	0.47
						Large stones	0.01
JaeB2:							
Jennings------------	80	Not limited		Not limited		Not limited	
JafC2:							
Jennings------------	45	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Blocher, hard bedrock substratum	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
JafC3:							
Jennings------------	45	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
Blocher, hard bedrock substratum	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
KxkC2:							
Knobcreek-----------	37	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Navilleton----------	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
KxlC3:							
Knobcreek-----------	33	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Haggatt-------------	26	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
KxlC3:							
Caneyville----------	24	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.90
						Droughty	0.47
						Slope	0.04
						Large stones	0.01
KxlE3:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18				
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18				
Caneyville----------	21	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Depth to bedrock	0.90
						Droughty	0.47
						Large stones	0.01
KxmE2:							
Knobcreek-----------	33	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18				
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18				
Caneyville----------	20	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18			Depth to bedrock	0.06
KxoC2:							
Knobcreek-----------	29	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Navilleton----------	28	Not limited		Not limited		Not limited	
Haggatt-------------	27	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
KxpD2:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02				
Haggatt-------------	31	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.02				
Caneyville----------	30	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.18			Depth to bedrock	0.06

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LpoAK:							
Lindside------------	82	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
McgC2:							
Markland------------	74	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
McnGQ:							
Markland------------	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	1.00	Slope	0.86		
McpC3:							
Markland------------	61	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
McuDQ:							
Markland------------	70	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
MdqDQ:							
Markland------------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
MhuA:							
McGary--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MhyA:							
Medora--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.18	Depth to saturated zone	0.18	Depth to saturated zone	0.56
MhyB2:							
Medora--------------	88	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.18	Depth to saturated zone	0.18	Depth to saturated zone	0.56
MhyC2:							
Medora--------------	73	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.56
		Depth to saturated zone	0.18	Depth to saturated zone	0.18	Slope	0.04
MhyC3:							
Medora--------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
MsvA:							
Montgomery----------	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
NaaA:							
Nabb----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
NaaB2:							
Nabb----------------	78	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
NbhAK:							
Newark--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
OfbAW:							
Oldenburg-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
PcrB2:							
Pekin---------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
PcrC2:							
Pekin---------------	72	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
PcrC3:							
Pekin---------------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
PhaA:							
Peoga---------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
Pml:							
Pits, quarry--------	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel------------	80	Not rated		Not rated		Not rated	

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
RblD3:							
Rarden	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01			Depth to bedrock	0.29
RbmD5:							
Rarden	74	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
						Slope	0.84
						Depth to bedrock	0.80
						Droughty	0.53
RptG:							
Rohan	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.27
						Large stones	0.01
Jessietown	36	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.96	Depth to bedrock	0.46
RtcA:							
Ryker	95	Not limited		Not limited		Not limited	
RtcB2:							
Ryker	92	Not limited		Not limited		Not limited	
RzrB2:							
Ryker	82	Not limited		Not limited		Not limited	
RztC2:							
Ryker	43	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Grayford	25	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
RztC3:							
Ryker	44	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
Grayford	28	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
RzvC2:							
Ryker	41	Not limited		Not limited		Not limited	
Grayford	26	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
RzvC3:							
Ryker	41	Not limited		Not limited		Not limited	
Grayford	26	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
SceB2:							
Scottsburg	96	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
SfyB:							
Shircliff	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
SoaB:							
Spickert	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
SodB:							
Spickert	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
SolC2:							
Spickert	44	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
Wrays	32	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
StaAQ:							
Steff	86	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
StdAQ:							
Stendal	88	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
StdAW:							
Stendal	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
ThaC2:							
Trappist	84	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.35
						Slope	0.04

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
ThbC3:							
Trappist------------	75	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.90
						Slope	0.04
						Droughty	0.03
ThbD5:							
Trappist------------	73	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
						Depth to bedrock	0.46
						Droughty	0.43
ThcD3:							
Trappist------------	44	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01			Depth to bedrock	0.71
Rohan---------------	29	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Droughty	1.00
						Depth to bedrock	1.00
						Slope	1.00
						Gravel content	0.39
						Large stones	0.01
ThdD:							
Trappist------------	49	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.01			Depth to bedrock	0.10
Rohan---------------	33	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Droughty	1.00
		Slope	0.32			Depth to bedrock	1.00
						Slope	1.00
TsaC3:							
Trappist------------	46	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.90
						Slope	0.04
						Droughty	0.03
Deputy--------------	23	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.04
Uaa:							
Udorthents, cut and filled------------	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled------------	65	Not rated		Not rated		Not rated	
Urban land----------	25	Not rated		Not rated		Not rated	

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UedA:							
Urban land----------	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land----------	65	Not rated		Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated		Not rated	
UngB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land----------	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
WaaAW:							
Wakeland------------	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
WedB2:							
Weddel--------------	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
WhcD:							
Wellrock------------	50	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84

Table 11b.--Recreational Development--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhcD:							
Gnawbone------------	41	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
						Depth to bedrock	0.01
WnmA:							
Whitcomb------------	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WokAV:							
Wilbur--------------	78	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
WokAW:							
Wilbur--------------	83	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
WprAW:							
Wirt----------------	83	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 12.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
AddA:										
Avonburg	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
AddB2:										
Avonburg	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
BbhA:										
Bartle	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
BcrAQ:										
Beanblossom	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
BcrAW:										
Beanblossom	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
BdoA:										
Bedford	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
BdoB:										
Bedford	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
BfbC2:										
Blocher, soft bedrock substratum	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Weddel	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
BfcC3:										
Blocher, soft bedrock substratum	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Weddel	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
BnyD3:										
Bonnell	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
BobE5:										
Bonnell	Very poor.	Very poor.	Poor	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
Hickory	Very poor.	Very poor.	Poor	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
BodAW:										
Bonnie	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
BvoG:										
Brownstown	Very poor.	Poor	Good	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Gilwood	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
CcaG:										
Caneyville	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Rock outcrop.										
CkkB2:										
Cincinnati	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
CldC2:										
Cincinnati	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Blocher	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
CldC3:										
Cincinnati	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Blocher	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
ClfA:										
Cobbsfork	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
ComC:										
Coolville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
ConC3:										
Coolville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Rarden	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
ConD:										
Coolville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Rarden	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
CspA:										
Crider	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
CspB2:										
Crider	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
CtrB2:										
Crider	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
CtwB:										
Crider	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Bedford	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Navilleton	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
CwaAQ:										
Cuba	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
CxgC3:										
Crider	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
CxhC2:										
Crider	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
CxmC2:										
Crider	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
CxnC3:										
Crider	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
DbrG:										
Deam	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
DdsAW:										
Dearborn	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
DfnA:										
Dubois	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
DtvC2:										
Deputy	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Trappist	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
EbpD2:										
Eden	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
EesA:										
Elkinsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Millstone	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
EesB:										
Elkinsville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Millstone	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
EesC2:										
Elkinsville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Millstone	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
EesD2:										
Elkinsville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Millstone	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
EesFQ:										
Elkinsville	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Millstone	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
EsaG:										
Eden	Very poor.	Poor	Good	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
GgbG:										
Gilwood	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
Brownstown	Very poor.	Poor	Good	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
GgfD:										
Gilwood	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Wrays	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
GgfE2:										
Gilwood	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Wrays	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
GmaG:										
Gnawbone	Very poor.	Very poor.	Good	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
Kurtz	Very poor.	Very poor.	Good	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
GyaD2:										
Grayford	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
GyaD3:										
Grayford	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
GyaD5:										
Grayford	Very poor.	Very poor.	Poor	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
GykD2:										
Grayford	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
GykD3:										
Grayford	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HcaA:										
Hatfield	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
HccB2:										
Haubstadt	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
HcdC2:										
Haubstadt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Shircliff	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
HceC3:										
Haubstadt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
HceC3:										
Shircliff----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
HcgAH:										
Haymond-----------	Poor	Fair	Fair	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
HcgAV:										
Haymond-----------	Fair	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
HcgAW:										
Haymond-----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
HerE:										
Hickory-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Bonnell-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HtwD2:										
Haggatt-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville--------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HtzD3:										
Haggatt-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville--------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HufAK:										
Huntington--------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
HuhD2:										
Haggatt-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville--------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HujD3:										
Haggatt-----------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville--------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
JaeB2:										
Jennings----------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
JafC2:										
Jennings	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Blocher, hard bedrock substratum	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
JafC3:										
Jennings	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Blocher, hard bedrock substratum	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
KxkC2:										
Knobcreek	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Navilleton	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
KxlC3:										
Knobcreek	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Caneyville	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
KxlE3:										
Knobcreek	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Haggatt	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
KxmE2:										
Knobcreek	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Haggatt	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
KxoC2:										
Knobcreek	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
KxoC2:										
Navilleton	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Haggatt	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
KxpD2:										
Knobcreek	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Haggatt	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Caneyville	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
LpoAK:										
Lindside	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
McgC2:										
Markland	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
McnGQ:										
Markland	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
McpC3:										
Markland	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
McuDQ:										
Markland	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
MdqDQ:										
Markland	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
MhuA:										
McGary	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
MhyA:										
Medora	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
MhyB2:										
Medora	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
MhyC2:										
Medora	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
MhyC3:										
Medora	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
MsvA:										
Montgomery--------	Fair	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
NaaA:										
Nabb--------------	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
NaaB2:										
Nabb--------------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
NbhAK:										
Newark------------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
OfbAW:										
Oldenburg---------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
PcrB2:										
Pekin-------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
PcrC2:										
Pekin-------------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
PcrC3:										
Pekin-------------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
PhaA:										
Peoga-------------	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Pml.										
Pits, quarry										
Ppu:										
Pits, sand and gravel										
RblD3:										
Rarden------------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
RbmD5:										
Rarden------------	Very poor.	Very poor.	Poor	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
RptG:										
Rohan-------------	Very poor.	Very poor.	Poor	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Poor	Very poor.
Jessietown--------	Very poor.	Very poor.	Good	Good	Good	Very poor.	Very poor.	Poor	Fair	Very poor.
RtcA:										
Ryker-------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
RtcB2:										
Ryker	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
RzrB2:										
Ryker	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
RztC2:										
Ryker	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Grayford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
RztC3:										
Ryker	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Grayford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
RzvC2:										
Ryker	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Grayford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
RzvC3:										
Ryker	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Grayford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
SceB2:										
Scottsburg	Good	Good	Good	Fair	Good	Poor	Very poor.	Good	Good	Very poor.
SfyB:										
Shircliff	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SoaB:										
Spickert	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SodB:										
Spickert	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SolC2:										
Spickert	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Wrays	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
StaAQ:										
Steff	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
StdAQ:										
Stendal	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
StdAW:										
Stendal	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
ThaC2:										
Trappist	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
ThbC3:										
Trappist	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
ThbD5:										
Trappist	Very poor.	Very poor.	Poor	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
ThcD3:										
Trappist	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Rohan	Very poor.	Poor	Poor	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Poor	Very poor.
ThdD:										
Trappist	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Rohan	Very poor.	Poor	Poor	Very poor.	Very poor.	Very poor.	Very poor.	Very poor.	Poor	Very poor.
TsaC3:										
Trappist	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Deputy	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Uaa.										
Udorthents, cut and filled										
UaoAK:										
Udifluvents, cut and filled.										
Urban land.										
UedA:										
Urban land.										
Aquents, clayey substratum.										

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
UndAY:										
Urban land.										
Udifluvents.										
UngB:										
Urban land.										
Udarents, fragipan substratum.										
UnkB:										
Urban land.										
Udarents, silty substratum.										
UnpA:										
Urban land.										
Udarents, loamy substratum.										
UnsB:										
Urban land.										
Udarents, clayey substratum.										
W.										
Water										
WaaAV:										
Wakeland----------	Fair	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
WaaAW:										
Wakeland----------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
WedB2:										
Weddel------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
WhcD:										
Wellrock----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Gnawbone----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
WnmA:										
Whitcomb----------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
WokAV:										
Wilbur------------	Fair	Fair	Good	Good	Good	Poor	Poor	Good	Good	Poor.
WokAW:										
Wilbur------------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.

Table 12.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
WprAW:										
Wirt--------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
AddB2:							
Avonburg	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
BbhA:							
Bartle	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BcrAQ:							
Beanblossom	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.87		
BcrAW:							
Beanblossom	89	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.87		
BdoA:							
Bedford	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BdoB:							
Bedford	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
BfbC2:							
Blocher, soft bedrock substratum	46	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
Weddel	30	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Shrink-swell	0.50

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
BfcC3:							
Blocher, soft bedrock substratum	49	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
Weddel	32	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
BnyD3:							
Bonnell	74	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
BobE5:							
Bonnell	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
Hickory	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BodAW:							
Bonnie	83	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BvoG:							
Brownstown	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Depth to hard bedrock	1.00	Content of large stones	0.18
		Depth to hard bedrock	0.06	Content of large stones	0.18	Depth to hard bedrock	0.06
Gilwood	38	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
CcaG:							
Caneyville	53	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.20	Depth to hard bedrock	1.00	Depth to hard bedrock	0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
						Slope	0.01

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
CldC2:							
Cincinnati----------	42	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
Blocher-------------	34	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.39	Shrink-swell	0.50	Shrink-swell	0.50
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
CldC3:							
Cincinnati----------	42	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Shrink-swell	0.50	Slope	1.00
				Slope	0.04		
Blocher-------------	34	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
ClfA:							
Cobbsfork-----------	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
ComC:							
Coolville-----------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
ConC3:							
Coolville-----------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Rarden--------------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
ConD:							
Coolville-----------	51	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ConD:							
Rarden	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.06		
CspA:							
Crider	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
CspB2:							
Crider	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
						Slope	0.01
CtrB2:							
Crider	78	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
CtwB:							
Crider	39	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.44	Shrink-swell	0.50
						Slope	0.01
Bedford	29	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
Navilleton	28	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
						Slope	0.01
CwaAQ:							
Cuba	92	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
CxgC3:							
Crider	46	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Haggatt	46	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.96	Slope	1.00
				Slope	0.04		
CxhC2:							
Crider	56	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
CxhC2:							
Haggatt-------------	37	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.88	Slope	1.00
				Slope	0.04		
CxmC2:							
Crider--------------	52	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Haggatt-------------	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.88	Slope	1.00
				Slope	0.04		
CxnC3:							
Crider--------------	44	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Haggatt-------------	44	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.96	Slope	1.00
				Slope	0.04		
DbrG:							
Deam----------------	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.06		
DdsAW:							
Dearborn------------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
DfnA:							
Dubois--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
DtvC2:							
Deputy--------------	50	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Trappist------------	27	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Shrink-swell	0.50	Shrink-swell	0.50
		Slope	0.04	Slope	0.04	Depth to hard bedrock	0.35

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EbpD2:							
Eden----------------	82	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
		Content of large stones	0.49	Depth to soft bedrock	0.95	Content of large stones	0.49
				Content of large stones	0.49		
EesA:							
Elkinsville---------	52	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Millstone-----------	43	Not limited		Not limited		Not limited	
EesB:							
Elkinsville---------	52	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
Millstone-----------	43	Not limited		Not limited		Somewhat limited	
						Slope	0.01
EesC2:							
Elkinsville---------	44	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Millstone-----------	43	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
EesD2:							
Elkinsville---------	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Millstone-----------	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
EesFQ:							
Elkinsville---------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Millstone-----------	47	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
EsaG:							
Eden----------------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Content of large stones	0.78	Content of large stones	0.78	Content of large stones	0.78
				Depth to soft bedrock	0.01		

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
GgbG:							
Gilwood-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
Brownstown----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Depth to hard bedrock	1.00	Content of large stones	0.18
		Depth to hard bedrock	0.06	Content of large stones	0.18	Depth to hard bedrock	0.06
GgfD:							
Gilwood-------------	39	Somewhat limited		Very limited		Very limited	
		Slope	0.84	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	0.84	Depth to hard bedrock	0.29
Wrays---------------	38	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Depth to hard bedrock	0.88	Slope	1.00
		Shrink-swell	0.50	Slope	0.84	Shrink-swell	0.50
				Shrink-swell	0.50		
GgfE2:							
Gilwood-------------	42	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Depth to hard bedrock	0.29
Wrays---------------	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	0.88	Shrink-swell	0.50
				Shrink-swell	0.50		
GmaG:							
Gnawbone------------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
Kurtz---------------	32	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
GyaD2:							
Grayford------------	73	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.26		
GyaD3:							
Grayford------------	78	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.50		

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
GyaD5:							
Grayford-----------	65	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.82		
GykD2:							
Grayford-----------	69	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.26		
GykD3:							
Grayford-----------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.50		
HcaA:							
Hatfield-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
HccB2:							
Haubstadt----------	84	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50			Shrink-swell	0.50
						Slope	0.01
HcdC2:							
Haubstadt----------	55	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.04	Depth to saturated zone	0.98
		Slope	0.04			Shrink-swell	0.50
Shircliff----------	23	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Shrink-swell	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to saturated zone	0.98
HceC3:							
Haubstadt----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
Shircliff----------	23	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Shrink-swell	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to saturated zone	0.98

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
HcgAH:							
Haymond	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HcgAV:							
Haymond	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HcgAW:							
Haymond	82	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HerE:							
Hickory	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Bonnell	38	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
HtwD2:							
Haggatt	51	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.88		
Caneyville	31	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.46	Slope	1.00	Depth to hard bedrock	0.46
HtzD3:							
Haggatt	51	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.96		
Caneyville	41	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to hard bedrock	0.90
HufAK:							
Huntington	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
HuhD2:							
Haggatt	46	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.88		

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
HuhD2:							
Caneyville----------	31	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Depth to hard bedrock	0.06
HujD3:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.96		
Caneyville----------	39	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to hard bedrock	0.90
JaeB2:							
Jennings------------	80	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
				Shrink-swell	0.50	Slope	0.01
JafC2:							
Jennings------------	45	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
Blocher, hard bedrock substratum	30	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
JafC3:							
Jennings------------	45	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Depth to saturated zone	0.98
				Slope	0.04		
Blocher, hard bedrock substratum	30	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
KxkC2:							
Knobcreek-----------	37	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
KxkC2:							
Navilleton----------	35	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
KxlC3:							
Knobcreek-----------	33	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
Haggatt-------------	26	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.96	Slope	1.00
				Slope	0.04		
Caneyville----------	24	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to hard bedrock	0.90
KxlE3:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.96		
Caneyville----------	21	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Depth to hard bedrock	0.90
KxmE2:							
Knobcreek-----------	33	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.88		
Caneyville----------	20	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Depth to hard bedrock	0.06

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
KxoC2:							
Knobcreek-----------	29	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
Navilleton----------	28	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	1.00	Slope	0.90
						Shrink-swell	0.50
Haggatt-------------	27	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.04	Depth to hard bedrock	0.88	Slope	1.00
				Slope	0.04		
KxpD2:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
Haggatt-------------	31	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Shrink-swell	1.00
				Depth to hard bedrock	0.88		
Caneyville----------	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.06	Slope	1.00	Depth to hard bedrock	0.06
LpoAK:							
Lindside------------	82	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
McgC2:							
Markland------------	74	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
McnGQ:							
Markland------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
McpC3:							
Markland------------	61	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
McuDQ:							
Markland------------	70	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Slope	1.00
		Shrink-swell	1.00	Slope	1.00	Flooding	1.00
		Slope	1.00	Shrink-swell	0.50	Shrink-swell	1.00

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
MdqDQ:							
Markland------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Slope	1.00
		Shrink-swell	1.00	Slope	1.00	Flooding	1.00
		Slope	1.00	Shrink-swell	0.50	Shrink-swell	1.00
MhuA:							
McGary--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
MhyA:							
Medora--------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.88	Depth to saturated zone	1.00	Depth to saturated zone	0.88
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
MhyB2:							
Medora--------------	88	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.88	Depth to saturated zone	1.00	Depth to saturated zone	0.88
				Shrink-swell	0.50	Slope	0.01
MhyC2:							
Medora--------------	73	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.88	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Depth to saturated zone	0.88
				Slope	0.04		
MhyC3:							
Medora--------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Shrink-swell	0.50	Slope	1.00
				Slope	0.04		
MsvA:							
Montgomery----------	82	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
NaaA:							
Nabb----------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50			Shrink-swell	0.50
NaaB2:							
Nabb----------------	78	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50			Shrink-swell	0.50
						Slope	0.01

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NbhAK:							
Newark--------------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
OfbAW:							
Oldenburg-----------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
PcrB2:							
Pekin---------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
						Slope	0.01
PcrC2:							
Pekin---------------	72	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to saturated zone	0.98
PcrC3:							
Pekin---------------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
PhaA:							
Peoga---------------	83	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pml:							
Pits, quarry--------	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel-------------	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden--------------	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.29		

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
RbmD5:							
Rarden	74	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.79	Shrink-swell	0.50
				Shrink-swell	0.50		
RptG:							
Rohan	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Jessietown	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
RtcA:							
Ryker	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
RtcB2:							
Ryker	92	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
RzrB2:							
Ryker	82	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
RztC2:							
Ryker	43	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Grayford	25	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Depth to hard bedrock	0.42	Shrink-swell	0.50
				Slope	0.04		
RztC3:							
Ryker	44	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Grayford	28	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Depth to hard bedrock	0.26	Shrink-swell	0.50
				Slope	0.04		
RzvC2:							
Ryker	41	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.88
						Shrink-swell	0.50

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RzvC2:							
Grayford-----------	26	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Depth to hard bedrock	0.42	Shrink-swell	0.50
				Slope	0.04		
RzvC3:							
Ryker---------------	41	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.88
						Shrink-swell	0.50
Grayford-----------	26	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Depth to hard bedrock	0.26	Shrink-swell	0.50
				Slope	0.04		
SceB2:							
Scottsburg----------	96	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
SfyB:							
Shircliff----------	75	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Shrink-swell	0.50	Depth to saturated zone	0.98
						Slope	0.01
SoaB:							
Spickert-----------	95	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50			Shrink-swell	0.50
						Slope	0.01
SodB:							
Spickert-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50			Shrink-swell	0.50
SolC2:							
Spickert-----------	44	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.04	Depth to saturated zone	0.98
		Slope	0.04			Shrink-swell	0.50
Wrays--------------	32	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to hard bedrock	0.54	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
StaAQ:							
Steff	86	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
StdAQ:							
Stendal	88	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
StdAW:							
Stendal	87	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
ThaC2:							
Trappist	84	Somewhat limited		Very limited		Very limited	
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Shrink-swell	0.50	Shrink-swell	0.50
		Slope	0.04	Slope	0.04	Depth to hard bedrock	0.35
ThbC3:							
Trappist	75	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to hard bedrock	0.90
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
ThbD5:							
Trappist	73	Somewhat limited		Very limited		Very limited	
		Slope	0.84	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.84	Shrink-swell	0.50
		Depth to hard bedrock	0.46	Shrink-swell	0.50	Depth to hard bedrock	0.46
ThcD3:							
Trappist	44	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Slope	1.00	Depth to hard bedrock	0.71
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Rohan	29	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
ThdD:							
Trappist	49	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.10	Shrink-swell	0.50	Depth to hard bedrock	0.10

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
ThdD:							
Rohan	33	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
TsaC3:							
Trappist	46	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to hard bedrock	0.90
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Deputy	23	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.98
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
Uaa:							
Udorthents, cut and filled	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled	65	Not rated		Not rated		Not rated	
Urban land	25	Not rated		Not rated		Not rated	
UedA:							
Urban land	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land	65	Not rated		Not rated		Not rated	
Udifluvents	25	Not rated		Not rated		Not rated	
UngB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, silty substratum	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum	30	Not rated		Not rated		Not rated	

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
UnsB:							
Urban land	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum	31	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WaaAW:							
Wakeland	82	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WedB2:							
Weddel	95	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.01
WhcD:							
Wellrock	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Gnawbone	41	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
				Depth to soft bedrock	0.01		
WnmA:							
Whitcomb	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
WokAV:							
Wilbur	78	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
WokAW:							
Wilbur	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98

Table 13a.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WprAW:							
Wirt----------------	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 13b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
AddB2:							
Avonburg	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
BbhA:							
Bartle	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
BcrAQ:							
Beanblossom	90	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	0.87		
		Flooding	0.40	Cutbanks cave	0.10		
BcrAW:							
Beanblossom	89	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.87	Flooding	0.60
		Flooding	1.00	Flooding	0.60		
				Cutbanks cave	0.10		
BdoA:							
Bedford	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Too clayey	1.00		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				
BdoB:							
Bedford	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Too clayey	1.00		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
BfbC2:							
Blocher, soft bedrock substratum	46	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
Weddel--------------	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.75	Slope	0.04		
		Shrink-swell	0.50	Too clayey	0.02		
		Slope	0.04				
BfcC3:							
Blocher, soft bedrock substratum	49	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
Weddel--------------	32	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Slope	0.04	Too clayey	0.02		
BnyD3:							
Bonnell-------------	74	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00	Too clayey	0.01		
		Frost action	0.50				
BobE5:							
Bonnell-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Too clayey	0.01		
		Frost action	0.50				
Hickory-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
BodAW:							
Bonnie	83	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
BvoG:							
Brownstown	39	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50			Depth to bedrock	0.06
		Content of large stones	0.18	Slope	1.00	Droughty	0.01
				Content of large stones	0.18		
		Depth to hard bedrock	0.06				
				Cutbanks cave	0.10		
Gilwood	38	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50			Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Slope	1.00		
				Cutbanks cave	0.10		
CcaG:							
Caneyville	53	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Depth to bedrock	0.20
		Shrink-swell	1.00	Slope	1.00		
		Frost action	0.50	Too clayey	0.76		
		Depth to hard bedrock	0.20	Cutbanks cave	0.10		
Rock outcrop	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati	80	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Low strength	1.00				
		Shrink-swell	0.50	Cutbanks cave	0.10		
CldC2:							
Cincinnati	42	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00				
		Depth to saturated zone	0.19	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
		Slope	0.04				
Blocher	34	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00				
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.19	Slope	0.04		
		Slope	0.04				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
CldC3:							
Cincinnati----------	42	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.96	Slope	0.04		
		Slope	0.04				
Blocher-------------	34	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
ClfA:							
Cobbsfork-----------	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
ComC:							
Coolville-----------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Shrink-swell	0.50	Too clayey	0.02		
		Slope	0.04				
ConC3:							
Coolville-----------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Shrink-swell	0.50	Too clayey	0.02		
		Slope	0.04				
Rarden--------------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.18	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.03
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04	Depth to soft bedrock	0.03		
ConD:							
Coolville-----------	51	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Slope	1.00	Too clayey	0.02		
		Shrink-swell	0.50				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ConD:							
Rarden	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.18	Depth to bedrock	0.06
		Slope	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Depth to soft bedrock	0.06		
CspA:							
Crider	85	Very limited		Very limited		Not limited	
		Frost action	1.00	Too clayey	1.00		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
CspB2:							
Crider	85	Very limited		Very limited		Not limited	
		Frost action	1.00	Too clayey	1.00		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
CtrB2:							
Crider	78	Very limited		Very limited		Not limited	
		Frost action	1.00	Too clayey	1.00		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
CtwB:							
Crider	39	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.82		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Bedford	29	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Too clayey	1.00		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Navilleton	28	Very limited		Very limited		Not limited	
		Frost action	1.00	Too clayey	1.00		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
CwaAQ:							
Cuba	92	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Flooding	0.40				
CxgC3:							
Crider	46	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CxgC3:							
Haggatt	46	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.96		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
CxhC2:							
Crider	56	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Haggatt	37	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.88		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
CxmC2:							
Crider	52	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Haggatt	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.88		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
CxnC3:							
Crider	44	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Haggatt	44	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.96		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
DbrG:							
Deam	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.06
		Shrink-swell	0.50	Depth to soft bedrock	0.06		
		Frost action	0.50	Too clayey	0.04		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
DdsAW:							
Dearborn------------	80	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Frost action	0.50	Content of large stones	0.42		
		Content of large stones	0.42	Cutbanks cave	0.10		
DfnA:							
Dubois--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
DtvC2:							
Deputy--------------	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Too clayey	0.12	Slope	0.04
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Trappist------------	27	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.35
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Depth to hard bedrock	0.35	Too clayey	0.01		
		Slope	0.04				
EbpD2:							
Eden----------------	82	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Depth to soft bedrock	0.95	Depth to bedrock	0.95
		Slope	1.00	Too clayey	0.68	Droughty	0.45
		Frost action	0.50	Content of large stones	0.49		
		Content of large stones	0.49	Cutbanks cave	0.10		
EesA:							
Elkinsville---------	52	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
Millstone-----------	43	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
EesB:							
Elkinsville---------	52	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
Millstone-----------	43	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EesC2:							
Elkinsville----------	44	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Shrink-swell	0.50				
		Slope	0.04				
Millstone-----------	43	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
EesD2:							
Elkinsville----------	44	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
Millstone-----------	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
EesFQ:							
Elkinsville----------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Flooding	0.40				
Millstone-----------	47	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Flooding	0.40				
EsaG:							
Eden-----------------	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Content of large stones	0.78	Content of large stones	0.16
		Shrink-swell	1.00	Too clayey	0.68	Depth to bedrock	0.01
		Content of large stones	0.78	Cutbanks cave	0.10		
		Frost action	0.50	Depth to soft bedrock	0.01		
GgbG:							
Gilwood-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Cutbanks cave	0.10		
Brownstown----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.06
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.01
		Depth to hard bedrock	0.06	Cutbanks cave	0.10		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GgfD:							
Gilwood	39	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	0.84
		Slope	0.84			Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Slope	0.84		
				Cutbanks cave	0.10		
Wrays	38	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	0.88	Slope	0.84
		Low strength	1.00				
		Slope	0.84	Slope	0.84		
		Shrink-swell	0.50	Cutbanks cave	0.10		
GgfE2:							
Gilwood	42	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00			Depth to bedrock	0.29
		Depth to hard bedrock	0.29	Slope	1.00		
				Cutbanks cave	0.10		
Wrays	36	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.88		
		Slope	1.00				
		Shrink-swell	0.50	Cutbanks cave	0.10		
GmaG:							
Gnawbone	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.01
		Frost action	0.50	Depth to soft bedrock	0.01		
Kurtz	32	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
GyaD2:							
Grayford	73	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Too clayey	0.82		
		Low strength	1.00	Depth to hard bedrock	0.26		
		Shrink-swell	0.50				
				Cutbanks cave	0.10		
GyaD3:							
Grayford	78	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Too clayey	0.82		
		Low strength	1.00	Depth to hard bedrock	0.50		
		Shrink-swell	0.50				
				Cutbanks cave	0.10		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GyaD5:							
Grayford	65	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Too clayey	0.82		
		Low strength	1.00	Depth to hard bedrock	0.82		
		Slope	1.00	Cutbanks cave	0.10		
GykD2:							
Grayford	69	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Too clayey	0.82		
		Low strength	1.00	Depth to hard bedrock	0.26		
		Shrink-swell	0.50	Cutbanks cave	0.10		
GykD3:							
Grayford	74	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Too clayey	0.82		
		Low strength	1.00	Depth to hard bedrock	0.50		
		Shrink-swell	0.50	Cutbanks cave	0.10		
HcaA:							
Hatfield	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
HccB2:							
Haubstadt	84	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
		Shrink-swell	0.50				
HcdC2:							
Haubstadt	55	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.75	Slope	0.04		
		Shrink-swell	0.50				
		Slope	0.04				
Shircliff	23	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	1.00	Too clayey	0.32		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Slope	0.37				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
HceC3:							
Haubstadt-----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Slope	0.04				
Shircliff-----------	23	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	1.00	Too clayey	0.32		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Slope	0.37				
HcgAH:							
Haymond-------------	85	Very limited		Somewhat limited		Very limited	
		Frost action	1.00	Flooding	0.80	Flooding	1.00
		Flooding	1.00	Cutbanks cave	0.10		
HcgAV:							
Haymond-------------	85	Very limited		Somewhat limited		Very limited	
		Frost action	1.00	Flooding	0.80	Flooding	1.00
		Flooding	1.00	Cutbanks cave	0.10		
HcgAW:							
Haymond-------------	82	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
HerE:							
Hickory-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
Bonnell-------------	38	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00	Too clayey	0.02		
		Frost action	0.50				
HtwD2:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.88		
		Slope	1.00	Cutbanks cave	0.10		
Caneyville----------	31	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00	Slope	1.00	Depth to bedrock	0.46
		Slope	1.00	Too clayey	0.76		
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.46				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HtzD3:							
Haggatt	51	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.96		
		Slope	1.00	Cutbanks cave	0.10		
Caneyville	41	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00			Depth to bedrock	0.90
		Slope	1.00	Slope	1.00	Droughty	0.47
		Depth to hard bedrock	0.90	Too clayey	0.76	Content of large stones	0.01
				Cutbanks cave	0.10		
		Frost action	0.50				
HufAK:							
Huntington	85	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
HuhD2:							
Haggatt	46	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.88		
		Slope	1.00				
				Cutbanks cave	0.10		
Caneyville	31	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00			Depth to bedrock	0.06
		Slope	1.00	Slope	1.00		
		Frost action	0.50	Too clayey	0.76		
		Depth to hard bedrock	0.06	Cutbanks cave	0.10		
HujD3:							
Haggatt	46	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.96		
		Slope	1.00				
				Cutbanks cave	0.10		
Caneyville	39	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00			Depth to bedrock	0.90
		Slope	1.00	Slope	1.00	Droughty	0.47
		Depth to hard bedrock	0.90	Too clayey	0.76	Content of large stones	0.01
				Cutbanks cave	0.10		
		Frost action	0.50				
JaeB2:							
Jennings	80	Very limited		Very limited		Not limited	
		Frost action	1.00	Depth to saturated zone	1.00		
		Low strength	1.00				
		Shrink-swell	0.50	Cutbanks cave	0.10		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
JafC2:							
Jennings------------	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Blocher, hard bedrock substratum	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
JafC3:							
Jennings------------	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	0.78	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.75	Slope	0.04		
		Slope	0.04	Too clayey	0.02		
Blocher, hard bedrock substratum	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
KxkC2:							
Knobcreek-----------	37	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Slope	0.04		
		Slope	0.04				
Navilleton----------	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
KxlC3:							
Knobcreek-----------	33	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Slope	0.04		
		Slope	0.04				
Haggatt-------------	26	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.96		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KxlC3:							
Caneyville----------	24	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
		Shrink-swell	1.00	Too clayey	0.76	Droughty	0.47
		Depth to hard bedrock	0.90	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04	Content of large stones	0.01
		Slope	0.04				
KxlE3:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00				
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.96		
		Slope	1.00	Cutbanks cave	0.10		
Caneyville----------	21	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00	Slope	1.00	Depth to bedrock	0.90
		Slope	1.00	Too clayey	0.76	Droughty	0.47
		Depth to hard bedrock	0.90	Cutbanks cave	0.10	Content of large stones	0.01
		Frost action	0.50				
KxmE2:							
Knobcreek-----------	33	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00				
Haggatt-------------	22	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.88		
		Slope	1.00	Cutbanks cave	0.10		
Caneyville----------	20	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00	Slope	1.00	Depth to bedrock	0.06
		Slope	1.00	Too clayey	0.76		
		Frost action	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.06				
KxoC2:							
Knobcreek-----------	29	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Slope	0.04		
		Slope	0.04				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KxoC2:							
Navilleton----------	28	Very limited		Very limited		Not limited	
		Frost action	1.00	Too clayey	1.00		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Haggatt------------	27	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Too clayey	1.00	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.88		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
KxpD2:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00				
Haggatt------------	31	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Depth to hard bedrock	0.88		
		Slope	1.00	Cutbanks cave	0.10		
Caneyville----------	30	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	1.00			Depth to bedrock	0.06
		Slope	1.00	Slope	1.00		
		Frost action	0.50	Too clayey	0.76		
		Depth to hard bedrock	0.06	Cutbanks cave	0.10		
LpoAK:							
Lindside-----------	82	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Flooding	1.00				
		Low strength	1.00	Flooding	0.60	Flooding	0.60
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				
McgC2:							
Markland-----------	74	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.12	Slope	0.04
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
McnGQ:							
Markland-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00				
		Flooding	0.40				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
McpC3:							
Markland------------	61	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.12	Slope	0.04
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50	Slope	0.04		
		Slope	0.04				
McuDQ:							
Markland------------	70	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	1.00				
		Frost action	0.50				
		Flooding	0.40				
MdqDQ:							
Markland------------	85	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Too clayey	0.12		
		Slope	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
		Flooding	0.40				
MhuA:							
McGary--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00				
MhyA:							
Medora--------------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.56
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.56				
		Shrink-swell	0.50				
MhyB2:							
Medora--------------	88	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.56
		Depth to saturated zone	0.56	Cutbanks cave	0.10		
MhyC2:							
Medora--------------	73	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.56
		Depth to saturated zone	0.56	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
MhyC3:							
Medora--------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
MsvA:							
Montgomery----------	82	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00				
NaaA:							
Nabb----------------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
		Shrink-swell	0.50				
NaaB2:							
Nabb----------------	78	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
		Shrink-swell	0.50				
NbhAK:							
Newark--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
OfbAW:							
Oldenburg-----------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.75	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		
PcrB2:							
Pekin---------------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
PcrC2:							
Pekin---------------	72	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to saturated zone	0.75	Slope	0.04		
		Slope	0.04				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
PcrC3:							
Pekin	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10	Slope	0.04
		Low strength	1.00	Slope	0.04		
		Slope	0.04				
PhaA:							
Peoga	83	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
Pml:							
Pits, quarry	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to soft bedrock	0.29	Depth to bedrock	0.29
		Slope	1.00				
		Shrink-swell	0.50	Too clayey	0.18		
				Cutbanks cave	0.10		
RbmD5:							
Rarden	74	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Slope	0.84	Too clayey	1.00
		Low strength	1.00	Depth to soft bedrock	0.79	Slope	0.84
		Slope	0.84			Depth to bedrock	0.80
		Shrink-swell	0.50	Too clayey	0.12	Droughty	0.53
				Cutbanks cave	0.10		
RptG:							
Rohan	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.27
						Content of large stones	0.01
Jessietown	36	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	1.00			Depth to bedrock	0.46
		Low strength	1.00	Slope	1.00		
		Depth to hard bedrock	0.46	Cutbanks cave	0.10		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
RtcA:							
Ryker	95	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.88		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
RtcB2:							
Ryker	92	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.88		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
RzrB2:							
Ryker	82	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.88		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
RztC2:							
Ryker	43	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.88	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Grayford	25	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.82	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.42		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
RztC3:							
Ryker	44	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.88	Slope	0.04
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Grayford	28	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.82	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.26		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
RzvC2:							
Ryker	41	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.88		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Grayford	26	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.82	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.42		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
RzvC3:							
Ryker	41	Very limited		Somewhat limited		Not limited	
		Frost action	1.00	Too clayey	0.88		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Grayford	26	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Too clayey	0.82	Slope	0.04
		Low strength	1.00	Depth to hard bedrock	0.26		
		Shrink-swell	0.50				
		Slope	0.04	Cutbanks cave	0.10		
				Slope	0.04		
SceB2:							
Scottsburg	96	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Depth to saturated zone	0.75	Too clayey	0.12		
				Cutbanks cave	0.10		
		Shrink-swell	0.50				
SfyB:							
Shircliff	75	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Shrink-swell	1.00	Too clayey	0.12		
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
SoaB:							
Spickert	95	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				
SodB:							
Spickert	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50				
SolC2:							
Spickert	44	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Depth to saturated zone	0.75	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
		Shrink-swell	0.50				
		Slope	0.04				
Wrays	32	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	0.54	Slope	0.04
		Low strength	1.00				
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
StaAQ:							
Steff	86	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
		Flooding	0.40				
StdAQ:							
Stendal	88	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Flooding	0.40				
StdAW:							
Stendal	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
ThaC2:							
Trappist	84	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.35
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Shrink-swell	0.50	Slope	0.04		
		Depth to hard bedrock	0.35	Too clayey	0.01		
		Slope	0.04				
ThbC3:							
Trappist	75	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
		Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
		Depth to hard bedrock	0.90	Slope	0.04	Droughty	0.03
		Shrink-swell	0.50	Too clayey	0.01		
		Slope	0.04				
ThbD5:							
Trappist	73	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	0.84
		Low strength	1.00	Slope	0.84	Depth to bedrock	0.46
		Slope	0.84	Too clayey	0.01	Droughty	0.43
		Shrink-swell	0.50				
		Depth to hard bedrock	0.46				
ThcD3:							
Trappist	44	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Depth to bedrock	0.71
		Slope	1.00	Cutbanks cave	0.10		
		Depth to hard bedrock	0.71	Too clayey	0.01		
		Shrink-swell	0.50				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
ThcD3:							
Rohan---------------	29	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.39
						Content of large stones	0.01
ThdD:							
Trappist------------	49	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Low strength	1.00			Depth to bedrock	0.10
		Slope	1.00	Slope	1.00		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to hard bedrock	0.10	Too clayey	0.01		
Rohan---------------	33	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
TsaC3:							
Trappist------------	46	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
		Low strength	1.00			Slope	0.04
		Depth to hard bedrock	0.90	Cutbanks cave	0.10	Droughty	0.03
				Slope	0.04		
		Shrink-swell	0.50	Too clayey	0.01		
		Slope	0.04				
Deputy--------------	23	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00				
		Depth to saturated zone	0.75	Too clayey	0.12	Slope	0.04
				Cutbanks cave	0.10		
		Shrink-swell	0.50	Slope	0.04		
		Slope	0.04				
Uaa:							
Udorthents, cut and filled-------------	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled-------------	65	Not rated		Not rated		Not rated	
Urban land----------	25	Not rated		Not rated		Not rated	
UedA:							
Urban land----------	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated		Not rated	

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
UndAY:							
Urban land	65	Not rated		Not rated		Not rated	
Udifluvents	25	Not rated		Not rated		Not rated	
UngB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, silty substratum	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum	31	Not rated		Not rated		Not rated	
W:							
Water	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
WaaAW:							
Wakeland	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
WedB2:							
Weddel	95	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75	Too clayey	0.02		
		Shrink-swell	0.50				

Table 13b.--Building Site Development--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhcD:							
Wellrock------------	50	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.84	Slope	0.84
		Low strength	1.00	Cutbanks cave	0.10		
		Slope	0.84				
		Shrink-swell	0.50				
Gnawbone------------	41	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.84	Slope	0.84
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.01
		Slope	0.84	Depth to soft bedrock	0.01		
WnmA:							
Whitcomb------------	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	1.00				
		Shrink-swell	0.50				
WokAV:							
Wilbur--------------	78	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
WokAW:							
Wilbur--------------	83	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
WprAW:							
Wirt----------------	83	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Flooding	0.60		

Table 14a.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:					
Avonburg------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
AddB2:					
Avonburg------------	75	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.10
BbhA:					
Bartle--------------	83	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
BcrAQ:					
Beanblossom---------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.59	Flooding	0.40
		Flooding	0.40	Depth to soft bedrock	0.13
BcrAW:					
Beanblossom---------	89	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
BdoA:					
Bedford-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
BdoB:					
Bedford-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
BfbC2:					
Blocher, soft bedrock substratum	46	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Depth to bedrock	0.22	Depth to saturated zone	0.19
		Slope	0.04		
Weddel--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.04	Seepage	0.53
		Slope	0.04		
BfcC3:					
Blocher, soft bedrock substratum	49	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to bedrock	0.22		
		Slope	0.04		
Weddel--------------	32	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	0.22	Seepage	0.53
		Slope	0.04		
BnyD3:					
Bonnell-------------	74	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00		
BobE5:					
Bonnell-------------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00		
Hickory-------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BodAW:					
Bonnie	83	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
BvoG:					
Brownstown	39	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Large stones	0.18		
Gilwood	38	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
CcaG:					
Caneyville	53	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	0.53
Rock outcrop	15	Not rated		Not rated	
CkkB2:					
Cincinnati	80	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
				Slope	0.35
		Depth to saturated zone	1.00	Depth to saturated zone	0.12
CldC2:					
Cincinnati	42	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Seepage	0.53
		Slope	0.04		
Blocher	34	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Seepage	0.53
		Slope	0.04		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
CldC3:					
Cincinnati----------	42	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Seepage	0.53
Blocher-------------	34	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Slope	0.04	Depth to saturated zone	0.19
ClfA:					
Cobbsfork-----------	85	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
ComC:					
Coolville-----------	71	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	0.96	Depth to soft bedrock	0.88
		Slope	0.04	Seepage	0.53
ConC3:					
Coolville-----------	45	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	0.98	Depth to soft bedrock	0.93
		Slope	0.04	Seepage	0.53
Rarden--------------	45	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		
ConD:					
Coolville-----------	51	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Depth to soft bedrock	0.84
		Depth to bedrock	0.94	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
ConD:					
Rarden	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to saturated zone	1.00
		Slope	1.00		
CspA:					
Crider	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
CspB2:					
Crider	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.35
CtrB2:					
Crider	78	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.18
CtwB:					
Crider	39	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.35
Bedford	29	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
Navilleton	28	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
				Slope	0.35
CwaAQ:					
Cuba	92	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Flooding	0.40
		Flooding	0.40		
CxgC3:					
Crider	46	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Haggatt	46	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to hard bedrock	0.96
		Slope	0.04	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
CxhC2:					
Crider	56	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Haggatt	37	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
		Slope	0.04	Seepage	0.53
CxmC2:					
Crider	52	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Haggatt	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.96	Seepage	1.00
		Slope	0.04	Depth to hard bedrock	0.88
CxnC3:					
Crider	44	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Haggatt	44	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Slope	0.04	Depth to hard bedrock	0.96
DbrG:					
Deam	94	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00		
DdsAW:					
Dearborn	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones	0.42		
DfnA:					
Dubois	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
DtvC2:					
Deputy	50	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.63	Seepage	0.53
		Slope	0.04	Depth to soft bedrock	0.18
Trappist	27	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		
EbpD2:					
Eden	82	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Large stones	0.49	Large stones	1.00
EesA:					
Elkinsville	52	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
Millstone	43	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
EesB:					
Elkinsville	52	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.35
Millstone	43	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.35
EesC2:					
Elkinsville	44	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Millstone	43	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
EesD2:					
Elkinsville	44	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
EesD2:					
Millstone-----------	44	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
EesFQ:					
Elkinsville---------	48	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
				Flooding	0.40
		Flooding	0.40		
Millstone-----------	47	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
				Flooding	0.40
		Flooding	0.40		
EsaG:					
Eden----------------	74	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Large stones	1.00
		Large stones	0.78		
GgbG:					
Gilwood-------------	45	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
Brownstown----------	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00		
				Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Large stones	0.18		
GgfD:					
Gilwood-------------	39	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.84		
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
Wrays---------------	38	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to hard bedrock	0.88
		Depth to bedrock	0.96		
		Slope	0.84	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
GgfE2:					
Gilwood-------------	42	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Wrays---------------	36	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.88
		Depth to bedrock	0.96	Seepage	0.53
GmaG:					
Gnawbone------------	48	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Kurtz---------------	32	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.89	Depth to soft bedrock	0.71
		Slow water movement	0.46	Seepage	0.53
GyaD2:					
Grayford------------	73	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.69	Seepage	0.53
		Slow water movement	0.46	Depth to hard bedrock	0.26
GyaD3:					
Grayford------------	78	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.81	Seepage	0.53
		Slow water movement	0.46	Depth to hard bedrock	0.50
GyaD5:					
Grayford------------	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.93	Depth to hard bedrock	0.82
		Slow water movement	0.46	Seepage	0.53
GykD2:					
Grayford------------	69	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.69	Seepage	1.00
		Slow water movement	0.46	Depth to hard bedrock	0.26

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GykD3:					
Grayford-----------	74	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.81	Seepage	1.00
		Slow water movement	0.46	Depth to hard bedrock	0.50
HcaA:					
Hatfield-----------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
HccB2:					
Haubstadt----------	84	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
HcdC2:					
Haubstadt----------	55	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Seepage	0.53
Shircliff----------	23	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.37	Seepage	0.53
HceC3:					
Haubstadt----------	55	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Seepage	0.53
Shircliff----------	23	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.37		
HcgAH:					
Haymond------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
HcgAV:					
Haymond-------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53
HcgAW:					
Haymond-------------	82	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53
HerE:					
Hickory-------------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Bonnell-------------	38	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00		
HtwD2:					
Haggatt-------------	51	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to hard bedrock	0.88
		Slope	1.00		
		Depth to bedrock	0.96	Seepage	0.53
Caneyville----------	31	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
HtzD3:					
Haggatt-------------	51	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to hard bedrock	0.96
		Slope	1.00		
		Depth to bedrock	0.99	Seepage	0.53
Caneyville----------	41	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
HufAK:					
Huntington----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	0.46	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
HuhD2:					
Haggatt	46	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
Caneyville	31	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
HujD3:					
Haggatt	46	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to hard bedrock	0.96
Caneyville	39	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
JaeB2:					
Jennings	80	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
				Slope	0.35
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
JafC2:					
Jennings	45	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Slope	0.04		
Blocher, hard bedrock substratum	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Slope	0.04		
JafC3:					
Jennings	45	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Slope	0.04		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
JafC3:					
Blocher, hard bedrock substratum	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Slope	0.04		
		Depth to bedrock	0.01		
KxkC2:					
Knobcreek-----------	37	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.04		
Navilleton----------	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.04		
KxlC3:					
Knobcreek-----------	33	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.04		
Haggatt-------------	26	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to hard bedrock	0.96
		Depth to bedrock	0.99		
		Slope	0.04	Seepage	0.53
Caneyville----------	24	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04	Seepage	0.53
KxlE3:					
Knobcreek-----------	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	1.00		
Haggatt-------------	22	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to hard bedrock	0.96
		Slope	1.00		
		Depth to bedrock	0.99	Seepage	0.53
Caneyville----------	21	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
KxmE2:					
Knobcreek-----------	33	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
Haggatt-------------	22	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.88
		Depth to bedrock	0.96	Seepage	0.53
Caneyville----------	20	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
KxoC2:					
Knobcreek-----------	29	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.04	Seepage	0.53
Navilleton----------	28	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
Haggatt-------------	27	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
		Slope	0.04		
KxpD2:					
Knobcreek-----------	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
Haggatt-------------	31	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00	Depth to hard bedrock	0.88
		Depth to bedrock	0.96		
Caneyville----------	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
LpoAK:					
Lindside-----------	82	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
McgC2:					
Markland------------	74	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.04		
McnGQ:					
Markland------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Flooding	0.40
		Flooding	0.40		
McpC3:					
Markland------------	61	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.04		
McuDQ:					
Markland------------	70	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Flooding	0.40
		Slope	1.00		
		Flooding	0.40		
MdqDQ:					
Markland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Flooding	0.40
		Slope	1.00		
		Flooding	0.40		
MhuA:					
McGary--------------	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
MhyA:					
Medora--------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.96
		Depth to saturated zone	1.00	Seepage	0.53
MhyB2:					
Medora--------------	88	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.96
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MhyC2:					
Medora----------------	73	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Slope	0.04	Seepage	0.53
MhyC3:					
Medora----------------	75	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.04	Seepage	0.53
MsvA:					
Montgomery------------	82	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
NaaA:					
Nabb------------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
NaaB2:					
Nabb------------------	78	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
NbhAK:					
Newark----------------	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
OfbAW:					
Oldenburg-------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
PcrB2:					
Pekin----------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
PcrC2:					
Pekin----------------	72	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Slope	0.04		
PcrC3:					
Pekin----------------	71	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.04		
PhaA:					
Peoga----------------	83	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
				Depth to saturated zone	1.00
		Ponding	1.00		
		Depth to saturated zone	1.00	Seepage	0.53
Pml:					
Pits, quarry--------	85	Not rated		Not rated	
Ppu:					
Pits, sand and gravel-------------	80	Not rated		Not rated	
RblD3:					
Rarden--------------	78	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to saturated zone	1.00	Slope	1.00
				Depth to saturated zone	1.00
		Depth to bedrock	1.00		
		Slope	1.00		
RbmD5:					
Rarden--------------	74	Very limited		Very limited	
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.84		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
RptG:					
Rohan	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
Jessietown	36	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
RtcA:					
Ryker	95	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
RtcB2:					
Ryker	92	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.35
RzrB2:					
Ryker	82	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.18
RztC2:					
Ryker	43	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Grayford	25	Somewhat limited		Very limited	
		Depth to bedrock	0.78	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
		Slope	0.04	Depth to hard bedrock	0.42
RztC3:					
Ryker	44	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
		Slope	0.04	Seepage	0.53
Grayford	28	Somewhat limited		Very limited	
		Depth to bedrock	0.69	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
		Slope	0.04	Depth to hard bedrock	0.26
RzvC2:					
Ryker	41	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
RzvC2:					
Grayford	26	Somewhat limited		Very limited	
		Depth to bedrock	0.78	Slope	1.00
		Slow water movement	0.46	Seepage	1.00
		Slope	0.04	Depth to hard bedrock	0.42
RzvC3:					
Ryker	41	Somewhat limited		Very limited	
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53
Grayford	26	Somewhat limited		Very limited	
		Depth to bedrock	0.69	Slope	1.00
		Slow water movement	0.46	Seepage	1.00
		Slope	0.04	Depth to hard bedrock	0.26
SceB2:					
Scottsburg	96	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Depth to bedrock	0.22	Slope	0.10
SfyB:					
Shircliff	75	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
SoaB:					
Spickert	95	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Depth to bedrock	0.11	Slope	0.35
SodB:					
Spickert	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.02
SolC2:					
Spickert	44	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.11	Seepage	0.53
		Slope	0.04		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
SolC2:					
Wrays	32	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.83	Depth to hard bedrock	0.54
		Slope	0.04	Seepage	0.53
StaAQ:					
Steff	86	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.98
		Flooding	0.40	Flooding	0.40
StdAQ:					
Stendal	88	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
		Flooding	0.40	Flooding	0.40
StdAW:					
Stendal	87	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
ThaC2:					
Trappist	84	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		
ThbC3:					
Trappist	75	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		
ThbD5:					
Trappist	73	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.84		
ThcD3:					
Trappist	44	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
ThcD3:					
Rohan---------------	29	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
ThdD:					
Trappist------------	49	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00		
Rohan---------------	33	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.28
TsaC3:					
Trappist------------	46	Very limited		Very limited	
		Slow water movement	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		
Deputy--------------	23	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	0.98	Depth to soft bedrock	0.93
		Slope	0.04	Seepage	0.53
Uaa:					
Udorthents, cut and filled-------------	83	Not rated		Not rated	
UaoAK:					
Udifluvents, cut and filled-------------	65	Not rated		Not rated	
Urban land----------	25	Not rated		Not rated	
UedA:					
Urban land----------	60	Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated	
UndAY:					
Urban land----------	65	Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated	
UngB:					
Urban land----------	45	Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated	

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
UnkB:					
Urban land----------	45	Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated	
UnpA:					
Urban land----------	45	Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated	
UnsB:					
Urban land----------	41	Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated	
W:					
Water---------------	100	Not rated		Not rated	
WaaAV:					
Wakeland-----------	83	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
WaaAW:					
Wakeland-----------	82	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
WedB2:					
Weddel--------------	95	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.35
WhcD:					
Wellrock------------	50	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Slope	0.84	Depth to soft bedrock	0.26
		Depth to bedrock	0.69		
Gnawbone------------	41	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.84		
		Slow water movement	0.46	Slope	1.00
				Seepage	0.53

Table 14a.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
WnmA:					
Whitcomb	87	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Depth to bedrock	0.22		
WokAV:					
Wilbur	78	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
WokAW:					
Wilbur	83	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
WprAW:					
Wirt	83	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		

Table 14b.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AddA:							
Avonburg------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Too clayey	0.50
AddB2:							
Avonburg------------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BbhA:							
Bartle--------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BcrAQ:							
Beanblossom---------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
						Gravel content	0.80
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.14
		Seepage, bottom layer	1.00	Flooding	0.40	Depth to saturated zone	0.01
				Depth to bedrock	0.14		
		Flooding	0.40				
BcrAW:							
Beanblossom---------	89	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Gravel content	0.80
						Depth to bedrock	0.14
		Depth to bedrock	1.00	Seepage	1.00	Depth to saturated zone	0.01
		Seepage, bottom layer	1.00	Depth to bedrock	0.14		
BdoA:							
Bedford-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
BdoB:							
Bedford-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
BfbC2:							
Blocher, soft bedrock substratum	46	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Depth to bedrock	1.00			Hard to compact	1.00
		Depth to saturated zone	0.86	Slope	0.04	Depth to saturated zone	0.47
		Slope	0.04			Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BfbC2:							
Weddel	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	0.04	Too clayey	0.50
		Too clayey	0.50			Slope	0.04
		Slope	0.04				
BfcC3:							
Blocher, soft bedrock substratum	49	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Depth to bedrock	1.00	Slope	0.04	Hard to compact	1.00
		Depth to saturated zone	0.86			Depth to saturated zone	0.47
		Slope	0.04			Slope	0.04
Weddel	32	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	0.04	Slope	0.04
		Slope	0.04				
BnyD3:							
Bonnell	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
BobE5:							
Bonnell	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Hickory	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
BodAW:							
Bonnie	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
BvoG:							
Brownstown	39	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
		Large stones	0.18			Large stones	0.18
						Gravel content	0.01
Gilwood	38	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.14

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
CcaG:							
Caneyville----------	53	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati----------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.80	Depth to saturated zone	0.12	Depth to saturated zone	0.38
CldC2:							
Cincinnati----------	42	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.86
		Slope	0.04	Slope	0.04	Slope	0.04
Blocher-------------	34	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.75	Too clayey	1.00
		Depth to saturated zone	1.00	Slope	0.04	Depth to saturated zone	0.86
		Slope	0.04			Slope	0.04
CldC3:							
Cincinnati----------	42	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
Blocher-------------	34	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Depth to saturated zone	0.86	Slope	0.04	Depth to saturated zone	0.47
		Slope	0.04			Slope	0.04
ClfA:							
Cobbsfork-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
ComC:							
Coolville-----------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.88	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.88
						Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
ConC3:							
Coolville	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.94	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.94
						Slope	0.04
Rarden	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	1.00
						Slope	0.04
ConD:							
Coolville	51	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.84	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.84
Rarden	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
CspA:							
Crider	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
CspB2:							
Crider	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Hard to compact	1.00
						Too clayey	0.50
CtrB2:							
Crider	78	Very limited		Not limited		Very limited	
		Too clayey	1.00			Hard to compact	1.00
		Depth to bedrock	1.00			Too clayey	0.50
CtwB:							
Crider	39	Very limited		Not limited		Very limited	
		Too clayey	1.00			Hard to compact	1.00
						Too clayey	0.50
Bedford	29	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
CtwB:							
Navilleton----------	28	Very limited		Not limited		Very limited	
		Too clayey	1.00			Hard to compact	1.00
						Too clayey	0.50
CwaAQ:							
Cuba----------------	92	Very limited		Somewhat limited		Not limited	
		Seepage, bottom layer	1.00	Flooding	0.40		
		Flooding	0.40				
CxgC3:							
Crider--------------	46	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
Haggatt-------------	46	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.96
						Slope	0.04
CxhC2:							
Crider--------------	56	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Too clayey	0.50
						Slope	0.04
Haggatt-------------	37	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.88	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.88
						Slope	0.04
CxmC2:							
Crider--------------	52	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Slope	0.04	Too clayey	0.50
		Too clayey	0.50			Slope	0.04
		Slope	0.04				
Haggatt-------------	35	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.88	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.88
						Slope	0.04
CxnC3:							
Crider--------------	44	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Depth to bedrock	1.00			Hard to compact	1.00
		Slope	0.04			Slope	0.04
Haggatt-------------	44	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.96
						Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
DbrG:							
Deam	94	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Depth to bedrock	1.00
DdsAW:							
Dearborn	80	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Large stones	0.89
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Large stones	0.89				
DfnA:							
Dubois	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Too clayey	0.50
DtvC2:							
Deputy	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.18	Depth to saturated zone	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	0.18
		Slope	0.04			Slope	0.04
Trappist	27	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	1.00
		Slope	0.04			Slope	0.04
EbpD2:							
Eden	82	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
		Large stones	0.49			Slope	1.00
						Large stones	0.49
EesA:							
Elkinsville	52	Not limited		Not limited		Somewhat limited	
						Too clayey	0.50
Millstone	43	Not limited		Not limited		Not limited	
EesB:							
Elkinsville	52	Not limited		Not limited		Not limited	
Millstone	43	Not limited		Not limited		Not limited	
EesC2:							
Elkinsville	44	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
Millstone	43	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
EesD2:							
Elkinsville	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Millstone	44	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
EesFQ:							
Elkinsville	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	0.40	Flooding	0.40		
Millstone	47	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Flooding	0.40	Flooding	0.40		
EsaG:							
Eden	74	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
		Large stones	0.78			Depth to bedrock	1.00
						Large stones	0.78
GgbG:							
Gilwood	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Gravel content	0.14
Brownstown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Seepage	0.52
						Large stones	0.18
		Large stones	0.18			Gravel content	0.01
GgfD:							
Gilwood	39	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.84	Slope	0.84	Slope	0.84
						Gravel content	0.09
Wrays	38	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.88	Depth to bedrock	0.88
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
GgfE2:							
Gilwood	42	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.08
Wrays	36	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.88	Depth to bedrock	0.88
		Too clayey	0.50			Too clayey	0.50

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GmaG:							
Gnawbone------------	48	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Kurtz---------------	32	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.71	Depth to bedrock	0.71
		Too clayey	0.50			Too clayey	0.50
GyaD2:							
Grayford------------	73	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.26	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.26
GyaD3:							
Grayford------------	78	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.50	Depth to bedrock	0.50
		Too clayey	0.50			Too clayey	0.50
GyaD5:							
Grayford------------	65	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.82	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.82
GykD2:							
Grayford------------	69	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.26	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.26
GykD3:							
Grayford------------	74	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.50	Depth to bedrock	0.50
		Too clayey	0.50			Too clayey	0.50
HcaA:							
Hatfield------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
HccB2:							
Haubstadt-----------	84	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
HcdC2:							
Haubstadt-----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HcdC2:							
Shircliff-----------	23	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to saturated zone	1.00
						Slope	0.37
HceC3:							
Haubstadt-----------	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
Shircliff-----------	23	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.37	Hard to compact	1.00
		Slope	0.37			Depth to saturated zone	1.00
						Slope	0.37
HcgAH:							
Haymond-------------	85	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
HcgAV:							
Haymond-------------	85	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
HcgAW:							
Haymond-------------	82	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
HerE:							
Hickory-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Bonnell-------------	38	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00			Slope	1.00
HtwD2:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.88	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.88
Caneyville----------	31	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HtzD3:							
Haggatt-------------	51	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.96	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.96
Caneyville----------	41	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
HufAK:							
Huntington----------	85	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
HuhD2:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.88	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.88
Caneyville----------	31	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00	Seepage	1.00	Depth to bedrock	1.00
						Slope	1.00
HujD3:							
Haggatt-------------	46	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.96	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.96
Caneyville----------	39	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00	Seepage	1.00	Depth to bedrock	1.00
						Slope	1.00
JaeB2:							
Jennings------------	80	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to saturated zone	0.19	Too clayey	0.50
		Depth to saturated zone	0.86			Depth to saturated zone	0.47
		Too clayey	0.50				
JafC2:							
Jennings------------	45	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to saturated zone	0.19	Too clayey	0.50
		Depth to saturated zone	0.86	Slope	0.04	Depth to saturated zone	0.47
		Too clayey	0.50			Slope	0.04
		Slope	0.04				

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
JafC2:							
Blocher, hard bedrock substratum	30	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Depth to bedrock	1.00	Slope	0.04	Depth to saturated zone	0.47
		Depth to saturated zone	0.86			Slope	0.04
		Slope	0.04				
JafC3:							
Jennings------------	45	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	0.04	Too clayey	0.50
		Too clayey	0.50			Slope	0.04
		Slope	0.04				
Blocher, hard bedrock substratum	30	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Depth to saturated zone	0.19	Too clayey	1.00
		Depth to bedrock	1.00	Slope	0.04	Depth to saturated zone	0.47
		Depth to saturated zone	0.86			Slope	0.04
		Slope	0.04				
KxkC2:							
Knobcreek-----------	37	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
Navilleton----------	35	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Depth to bedrock	1.00			Too clayey	0.50
		Slope	0.04			Slope	0.04
KxlC3:							
Knobcreek-----------	33	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
Haggatt-------------	26	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.96
						Slope	0.04
Caneyville----------	24	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	1.00
						Slope	0.04
KxlE3:							
Knobcreek-----------	35	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00			Hard to compact	1.00
						Slope	1.00

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
KxlE3:							
Haggatt	22	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.96	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.96
Caneyville	21	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
KxmE2:							
Knobcreek	33	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00			Hard to compact	1.00
						Slope	1.00
Haggatt	22	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.88	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.88
Caneyville	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
KxoC2:							
Knobcreek	29	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Hard to compact	1.00
						Slope	0.04
Navilleton	28	Very limited		Not limited		Very limited	
		Too clayey	1.00			Hard to compact	1.00
		Depth to bedrock	1.00			Too clayey	0.50
Haggatt	27	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.88	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Slope	0.04			Depth to bedrock	0.88
						Slope	0.04
KxpD2:							
Knobcreek	35	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00			Hard to compact	1.00
						Slope	1.00
Haggatt	31	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.88	Hard to compact	1.00
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.88

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
KxpD2:							
Caneyville	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00	Seepage	1.00	Depth to bedrock	1.00
						Slope	1.00
LpoAK:							
Lindside	82	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50				
McgC2:							
Markland	74	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Slope	0.04
McnGQ:							
Markland	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00	Flooding	0.40	Too clayey	1.00
		Flooding	0.40			Hard to compact	1.00
McpC3:							
Markland	61	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.04	Too clayey	1.00
		Slope	0.04			Slope	0.04
McuDQ:							
Markland	70	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00	Flooding	0.40	Slope	1.00
		Flooding	0.40				
MdqDQ:							
Markland	85	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00	Flooding	0.40	Slope	1.00
		Flooding	0.40				
MhuA:							
McGary	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
MhyA:							
Medora	85	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.96	Depth to saturated zone	0.98
		Too clayey	0.50				

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
MhyB2:							
Medora	88	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.96	Depth to saturated zone	0.98
		Too clayey	0.50				
MhyC2:							
Medora	73	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.96	Depth to saturated zone	0.98
		Too clayey	0.50	Slope	0.04	Slope	0.04
		Slope	0.04				
MhyC3:							
Medora	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
MsvA:							
Montgomery	82	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
NaaA:							
Nabb	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
NaaB2:							
Nabb	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
NbhAK:							
Newark	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
OfbAW:							
Oldenburg	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.09
		Seepage, bottom layer	1.00	Seepage	1.00		
PcrB2:							
Pekin	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PcrC2:							
Pekin---------------	72	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
PcrC3:							
Pekin---------------	71	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
PhaA:							
Peoga---------------	83	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pml:							
Pits, quarry--------	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel-------------	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden--------------	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Hard to compact	1.00
		Slope	1.00			Depth to bedrock	1.00
						Slope	1.00
RbmD5:							
Rarden--------------	74	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.84	Depth to bedrock	1.00
		Slope	0.84			Slope	0.84
RptG:							
Rohan---------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.87
Jessietown----------	36	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
RtcA:							
Ryker---------------	95	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RtcB2:							
Ryker---------------	92	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
RzrB2:							
Ryker---------------	82	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
RztC2:							
Ryker---------------	43	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
Grayford------------	25	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
		Too clayey	0.50	Slope	0.04	Depth to bedrock	0.42
		Slope	0.04			Slope	0.04
RztC3:							
Ryker---------------	44	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
Grayford------------	28	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.26	Too clayey	0.50
		Too clayey	0.50	Slope	0.04	Depth to bedrock	0.26
		Slope	0.04			Slope	0.04
RzvC2:							
Ryker---------------	41	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Too clayey	0.50
		Too clayey	0.50				
Grayford------------	26	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
		Too clayey	0.50	Slope	0.04	Depth to bedrock	0.42
		Slope	0.04			Slope	0.04
RzvC3:							
Ryker---------------	41	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Too clayey	0.50
		Too clayey	0.50				
Grayford------------	26	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.26	Too clayey	0.50
		Too clayey	0.50	Slope	0.04	Depth to bedrock	0.26
		Slope	0.04			Slope	0.04
SceB2:							
Scottsburg----------	96	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00			Too clayey	0.50
		Too clayey	0.50				

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SfyB:							
Shircliff-----------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Depth to saturated zone	1.00
SoaB:							
Spickert-----------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00				
SodB:							
Spickert-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00				
SolC2:							
Spickert-----------	44	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00	Slope	0.04	Slope	0.04
		Slope	0.04				
Wrays---------------	32	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.54	Depth to bedrock	0.54
		Too clayey	0.50	Slope	0.04	Too clayey	0.50
		Slope	0.04			Slope	0.04
StaAQ:							
Steff---------------	86	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		
StdAQ:							
Stendal-------------	88	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		
StdAW:							
Stendal-------------	87	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
ThaC2:							
Trappist------------	84	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	1.00
		Slope	0.04			Slope	0.04
ThbC3:							
Trappist------------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	1.00
		Slope	0.04			Slope	0.04

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
ThbD5:							
Trappist-----------	73	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.84	Depth to bedrock	1.00
		Slope	0.84			Slope	0.84
ThcD3:							
Trappist-----------	44	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00			Slope	1.00
Rohan--------------	29	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.88
						Too clayey	0.50
ThdD:							
Trappist-----------	49	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00			Slope	1.00
Rohan--------------	33	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.63
TsaC3:							
Trappist-----------	46	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	1.00
		Slope	0.04			Slope	0.04
Deputy-------------	23	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.94	Depth to saturated zone	1.00
		Too clayey	1.00	Slope	0.04	Depth to bedrock	0.94
		Slope	0.04			Slope	0.04
Uaa:							
Udorthents, cut and filled------------	83	Not rated		Not rated		Not rated	
UaoAK:							
Udifluvents, cut and filled------------	65	Not rated		Not rated		Not rated	
Urban land----------	25	Not rated		Not rated		Not rated	
UedA:							
Urban land----------	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated		Not rated	

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UndAY:							
Urban land----------	65	Not rated		Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated		Not rated	
UngB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land----------	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland------------	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
WaaAW:							
Wakeland------------	82	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
WedB2:							
Weddel--------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00			Too clayey	0.50
		Too clayey	0.50				
WhcD:							
Wellrock------------	50	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Slope	0.84	Slope	0.84
		Slope	0.84	Depth to bedrock	0.26	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.26

Table 14b.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WhcD:							
Gnawbone------------	41	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
WnmA:							
Whitcomb------------	87	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to bedrock	1.00			Too clayey	0.50
		Too clayey	0.50				
WokAV:							
Wilbur--------------	78	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
WokAW:							
Wilbur--------------	83	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
WprAW:							
Wirt----------------	83	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		

Table 15a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
AddA:					
Avonburg------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
AddB2:					
Avonburg------------	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BbhA:					
Bartle--------------	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BcrAQ:					
Beanblossom---------	90	Fair		Poor	
		Thickest layer	0.66	Bottom layer	0.00
		Bottom layer	0.86	Thickest layer	0.00
BcrAW:					
Beanblossom---------	89	Fair		Poor	
		Thickest layer	0.66	Bottom layer	0.00
		Bottom layer	0.86	Thickest layer	0.00
BdoA:					
Bedford-------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
BdoB:					
Bedford-------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
BfbC2:					
Blocher, soft bedrock substratum	46	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Weddel--------------	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BfcC3:					
Blocher, soft bedrock substratum	49	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
BfcC3:					
Weddel	32	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BnyD3:					
Bonnell	74	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BobE5:					
Bonnell	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hickory	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BodAW:					
Bonnie	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BvoG:					
Brownstown	39	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gilwood	38	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
CcaG:					
Caneyville	53	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	15	Not rated		Not rated	
CkkB2:					
Cincinnati	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CldC2:					
Cincinnati	42	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blocher	34	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CldC3:					
Cincinnati	42	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
CldC3:					
Blocher	34	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ClfA:					
Cobbsfork	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ComC:					
Coolville	71	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ConC3:					
Coolville	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rarden	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ConD:					
Coolville	51	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rarden	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CspA:					
Crider	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CspB2:					
Crider	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CtrB2:					
Crider	78	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CtwB:					
Crider	39	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Bedford	29	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Navilleton	28	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
CwaAQ:					
Cuba----------------	92	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CxgC3:					
Crider--------------	46	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Haggatt-------------	46	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CxhC2:					
Crider--------------	56	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Haggatt-------------	37	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CxmC2:					
Crider--------------	52	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Haggatt-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
CxnC3:					
Crider--------------	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DbrG:					
Deam----------------	94	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DdsAW:					
Dearborn------------	80	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
DfnA:					
Dubois--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
DtvC2:					
Deputy--------------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel: Rating class	Value	Potential as source of sand: Rating class	Value
DtvC2:					
Trappist------------	27	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
EbpD2:					
Eden----------------	82	Fair		Poor	
		Thickest layer	0.03	Bottom layer	0.00
		Bottom layer	0.03	Thickest layer	0.00
EesA:					
Elkinsville---------	52	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Millstone-----------	43	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EesB:					
Elkinsville---------	52	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Millstone-----------	43	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EesC2:					
Elkinsville---------	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Millstone-----------	43	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EesD2:					
Elkinsville---------	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Millstone-----------	44	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EesFQ:					
Elkinsville---------	48	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Millstone-----------	47	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EsaG:					
Eden----------------	74	Fair		Poor	
		Bottom layer	0.03	Bottom layer	0.00
		Thickest layer	0.03	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
GgbG:					
Gilwood------------	45	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
Brownstown----------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
GgfD:					
Gilwood------------	39	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
Wrays---------------	38	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
GgfE2:					
Gilwood------------	42	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
Wrays---------------	36	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
GmaG:					
Gnawbone-----------	48	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kurtz---------------	32	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
GyaD2:					
Grayford-----------	73	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GyaD3:					
Grayford-----------	78	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GyaD5:					
Grayford-----------	65	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GykD2:					
Grayford-----------	69	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GykD3:					
Grayford-----------	74	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
HcaA:					
Hatfield-----------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HccB2:					
Haubstadt----------	84	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcdC2:					
Haubstadt----------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Shircliff----------	23	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HceC3:					
Haubstadt----------	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Shircliff----------	23	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcgAH:					
Haymond------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcgAV:					
Haymond------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HcgAW:					
Haymond------------	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HerE:					
Hickory------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bonnell------------	38	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HtwD2:					
Haggatt------------	51	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Caneyville---------	31	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
HtzD3:					
Haggatt-------------	51	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Caneyville----------	41	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HufAK:					
Huntington----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HuhD2:					
Haggatt-------------	46	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Caneyville----------	31	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
HujD3:					
Haggatt-------------	46	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Caneyville----------	39	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
JaeB2:					
Jennings------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
JafC2:					
Jennings------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blocher, hard bedrock substratum	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
JafC3:					
Jennings------------	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blocher, hard bedrock substratum	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
KxkC2:					
Knobcreek-----------	37	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Navilleton----------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
KxlC3:					
Knobcreek-----------	33	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	26	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Caneyville----------	24	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
KxlE3:					
Knobcreek-----------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	22	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Caneyville----------	21	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
KxmE2:					
Knobcreek-----------	33	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	22	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Caneyville----------	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
KxoC2:					
Knobcreek-----------	29	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Navilleton----------	28	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	27	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
KxpD2:					
Knobcreek-----------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haggatt-------------	31	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Caneyville----------	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LpoAK:					
Lindside------------	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
McgC2:					
Markland------------	74	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
McnGQ:					
Markland------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
McpC3:					
Markland------------	61	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
McuDQ:					
Markland------------	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MdqDQ:					
Markland------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MhuA:					
McGary--------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MhyA:					
Medora--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MhyB2:					
Medora--------------	88	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
MhyC2:					
Medora--------------	73	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MhyC3:					
Medora--------------	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
MsvA:					
Montgomery----------	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
NaaA:					
Nabb----------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
NaaB2:					
Nabb----------------	78	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
NbhAK:					
Newark--------------	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
OfbAW:					
Oldenburg-----------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.28
PcrB2:					
Pekin---------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PcrC2:					
Pekin---------------	72	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PcrC3:					
Pekin---------------	71	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
PhaA:					
Peoga---------------	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Pml:					
Pits, quarry--------	85	Not rated		Not rated	

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
Ppu:					
Pits, sand and gravel	80	Not rated		Not rated	
RblD3:					
Rarden	78	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
RbmD5:					
Rarden	74	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
RptG:					
Rohan	45	Fair		Poor	
		Thickest layer	0.01	Bottom layer	0.00
		Bottom layer	0.71	Thickest layer	0.00
Jessietown	36	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RtcA:					
Ryker	95	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RtcB2:					
Ryker	92	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RzrB2:					
Ryker	82	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RztC2:					
Ryker	43	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Grayford	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RztC3:					
Ryker	44	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Grayford	28	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RzvC2:					
Ryker	41	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
RzvC2:					
Grayford------------	26	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
RzvC3:					
Ryker---------------	41	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Grayford------------	26	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
SceB2:					
Scottsburg----------	96	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
SfyB:					
Shircliff-----------	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
SoaB:					
Spickert------------	95	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.66	Thickest layer	0.00
SodB:					
Spickert------------	90	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.66	Thickest layer	0.00
SolC2:					
Spickert------------	44	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.66	Thickest layer	0.00
Wrays---------------	32	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.29	Thickest layer	0.00
StaAQ:					
Steff---------------	86	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
StdAQ:					
Stendal-------------	88	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
StdAW:					
Stendal-------------	87	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
ThaC2:					
Trappist	84	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ThbC3:					
Trappist	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ThbD5:					
Trappist	73	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ThcD3:					
Trappist	44	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rohan	29	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.71	Thickest layer	0.00
ThdD:					
Trappist	49	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rohan	33	Fair		Poor	
		Thickest layer	0.04	Bottom layer	0.00
		Bottom layer	0.71	Thickest layer	0.00
TsaC3:					
Trappist	46	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Deputy	23	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Uaa:					
Udorthents, cut and filled	83	Not rated		Not rated	
UaoAK:					
Udifluvents, cut and filled	65	Not rated		Not rated	
Urban land	25	Not rated		Not rated	
UedA:					
Urban land	60	Not rated		Not rated	
Aquents, clayey substratum	25	Not rated		Not rated	

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
UndAY:					
Urban land----------	65	Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated	
UngB:					
Urban land----------	45	Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated	
UnkB:					
Urban land----------	45	Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated	
UnpA:					
Urban land----------	45	Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated	
UnsB:					
Urban land----------	41	Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated	
W:					
Water---------------	100	Not rated		Not rated	
WaaAV:					
Wakeland------------	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WaaAW:					
Wakeland------------	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WedB2:					
Weddel--------------	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WhcD:					
Wellrock------------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Gnawbone------------	41	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WnmA:					
Whitcomb------------	87	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
WokAV:					
Wilbur--------------	78	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WokAW:					
Wilbur--------------	83	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WprAW:					
Wirt----------------	83	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.15	Thickest layer	0.00

Table 15b.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
AddA:							
Avonburg	85	Fair		Poor		Poor	
		Too acid	0.03	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.32
		Water erosion	0.37				
AddB2:							
Avonburg	75	Fair		Poor		Poor	
		Too acid	0.03	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.32
		Water erosion	0.37				
BbhA:							
Bartle	83	Fair		Poor		Poor	
		Too acid	0.05	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.78	Too acid	0.41
		Water erosion	0.37				
BcrAQ:							
Beanblossom	90	Fair		Fair		Poor	
		Content of organic matter	0.88	Depth to bedrock	0.87	Hard to reclaim (rock fragments)	0.00
		Water erosion	0.90			Rock fragments	0.98
		Too acid	0.92				
BcrAW:							
Beanblossom	89	Fair		Fair		Poor	
		Content of organic matter	0.88	Depth to bedrock	0.87	Hard to reclaim (rock fragments)	0.00
		Water erosion	0.90			Rock fragments	0.98
		Too acid	0.92				
BdoA:							
Bedford	90	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.50
				Shrink-swell	0.78		
		Water erosion	0.37				
BdoB:							
Bedford	90	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.50
				Shrink-swell	0.78		
		Water erosion	0.37				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
BfbC2:							
Blocher, soft bedrock substratum	46	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.12	Shrink-swell	0.87	Too acid	0.76
		Content of organic matter	0.12	Wetness	0.89	Wetness	0.89
						Slope	0.96
		Water erosion	0.68				
Weddel--------------	30	Fair		Poor		Fair	
		Too acid	0.16	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.18	Wetness	0.14	Too acid	0.88
				Shrink-swell	0.99	Slope	0.96
		Water erosion	0.37				
BfcC3:							
Blocher, soft bedrock substratum	49	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.12	Shrink-swell	0.87	Too acid	0.76
		Content of organic matter	0.12	Wetness	0.89	Wetness	0.89
						Slope	0.96
		Water erosion	0.90				
Weddel--------------	32	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too acid	0.68
		Too acid	0.16	Shrink-swell	0.99	Slope	0.96
		Water erosion	0.68			Rock fragments	0.98
BnyD3:							
Bonnell-------------	74	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.55	Slope	0.00
		Too acid	0.32	Slope	0.92	Too clayey	0.00
		Content of organic matter	0.50			Too acid	0.88
		Carbonate content	0.97				
BobE5:							
Bonnell-------------	45	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.08	Slope	0.00
		Content of organic matter	0.50	Shrink-swell	0.67	Too clayey	0.00
						Too acid	0.88
		Too acid	0.50				
		Carbonate content	0.97				
Hickory-------------	30	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.08	Too clayey	0.57
		Too acid	0.54			Too acid	0.98
		Carbonate content	0.92				
		Too clayey	0.98				
BodAW:							
Bonnie--------------	83	Fair		Poor		Poor	
		Content of organic matter	0.50	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too acid	0.95
		Too acid	0.50				
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
BvoG:							
Brownstown----------	39	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
		Droughty	0.20	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Cobbles	0.51	Too acid	0.59
		Depth to bedrock	0.93			Depth to bedrock	0.93
		Cobbles	0.98				
Gilwood-------------	38	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.71			Too acid	0.59
		Droughty	0.81			Depth to bedrock	0.71
		Water erosion	0.99				
CcaG:							
Caneyville----------	53	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Droughty	0.72	Low strength	0.00	Too clayey	0.00
		Depth to bedrock	0.79	Depth to bedrock	0.00	Depth to bedrock	0.79
		Too acid	0.84	Shrink-swell	0.23	Rock fragments	0.99
		Water erosion	0.90				
		Content of organic matter	0.92				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
CkkB2:							
Cincinnati----------	80	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.82
		Too acid	0.26	Wetness	0.93	Wetness	0.93
		Water erosion	0.37				
CldC2:							
Cincinnati----------	42	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Wetness	0.53
		Too acid	0.26	Wetness	0.53	Too acid	0.82
		Water erosion	0.37			Slope	0.96
Blocher-------------	34	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Wetness	0.53	Wetness	0.53
		Too acid	0.26	Shrink-swell	0.94	Too acid	0.82
		Water erosion	0.68			Slope	0.96
		Carbonate content	0.97				
CldC3:							
Cincinnati----------	42	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Wetness	0.02
		Too acid	0.26	Wetness	0.02	Too acid	0.82
		Water erosion	0.37	Shrink-swell	0.99	Slope	0.96
		Carbonate content	0.97				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
CldC3:							
Blocher-------------	34	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Wetness	0.89	Too acid	0.82
		Too acid	0.26	Shrink-swell	0.94	Wetness	0.89
		Water erosion	0.68			Slope	0.96
		Carbonate content	0.97				
ClfA:							
Cobbsfork-----------	85	Fair		Poor		Poor	
		Too acid	0.08	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.22	Too acid	0.50
		Water erosion	0.37				
ComC:							
Coolville-----------	71	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.05	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.12	Too acid	0.50
		Water erosion	0.68	Shrink-swell	0.87	Slope	0.96
ConC3:							
Coolville-----------	45	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.00
		Too acid	0.50	Depth to bedrock	0.07	Too acid	0.50
		Water erosion	0.68	Shrink-swell	0.87	Slope	0.96
Rarden--------------	45	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.00	Too acid	0.41
		Water erosion	0.68	Shrink-swell	0.87	Slope	0.96
		Droughty	0.70			Depth to bedrock	0.97
		Depth to bedrock	0.97				
ConD:							
Coolville-----------	51	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.05	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.16	Slope	0.00
		Water erosion	0.68	Shrink-swell	0.87	Too acid	0.50
Rarden--------------	30	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Too acid	0.50	Low strength	0.00	Slope	0.00
		Content of organic matter	0.50	Depth to bedrock	0.00	Too clayey	0.00
		Droughty	0.52	Shrink-swell	0.87	Too acid	0.41
		Water erosion	0.90			Depth to bedrock	0.93
		Depth to bedrock	0.93				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CspA:							
Crider	85	Fair		Poor		Fair	
		Content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.66	Too acid	0.98
		Water erosion	0.68				
		Too clayey	0.98				
CspB2:							
Crider	85	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.53	Too acid	0.98
		Water erosion	0.68				
		Too clayey	0.98				
CtrB2:							
Crider	78	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.53	Too acid	0.98
		Water erosion	0.68				
		Too clayey	0.98				
CtwB:							
Crider	39	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Too acid	0.98
		Content of organic matter	0.50	Shrink-swell	0.88		
		Water erosion	0.68				
Bedford	29	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.50
		Water erosion	0.37	Shrink-swell	0.78		
Navilleton	28	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.98
		Too acid	0.32	Shrink-swell	0.51		
		Water erosion	0.68				
CwaAQ:							
Cuba	92	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Too acid	0.88
		Water erosion	0.68				
		Content of organic matter	0.88				
CxgC3:							
Crider	46	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.41	Slope	0.96
		Water erosion	0.68			Too acid	0.98
		Too clayey	0.98				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CxgC3:							
Haggatt-------------	46	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Too acid	0.92
		Too acid	0.50	Shrink-swell	0.14	Slope	0.96
		Droughty	0.99				
		Water erosion	0.99				
CxhC2:							
Crider--------------	56	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.53	Slope	0.96
		Water erosion	0.68			Too acid	0.98
		Too clayey	0.98				
Haggatt-------------	37	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.50	Depth to bedrock	0.12	Too acid	0.92
		Content of organic matter	0.50	Shrink-swell	0.23	Slope	0.96
		Water erosion	0.90				
CxmC2:							
Crider--------------	52	Fair		Poor		Fair	
		Content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.66	Slope	0.96
		Water erosion	0.68			Too acid	0.98
		Too clayey	0.98				
Haggatt-------------	35	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Too acid	0.92
		Too acid	0.50	Shrink-swell	0.23	Slope	0.96
		Water erosion	0.90				
CxnC3:							
Crider--------------	44	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
		Too acid	0.54	Shrink-swell	0.41	Slope	0.96
		Water erosion	0.68			Too acid	0.98
		Too clayey	0.98				
Haggatt-------------	44	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Too acid	0.92
		Too acid	0.50	Shrink-swell	0.14	Slope	0.96
		Droughty	0.99				
		Water erosion	0.99				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DbrG:							
Deam----------------	94	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too clayey	0.00
		Droughty	0.51	Slope	0.00	Too acid	0.41
		Content of organic matter	0.88	Shrink-swell	0.87	Depth to bedrock	0.93
		Water erosion	0.90				
		Depth to bedrock	0.93				
DdsAW:							
Dearborn------------	80	Fair		Fair		Poor	
		Content of stones	0.33	Cobbles	0.28	Rock fragments	0.00
		Cobbles	0.79	Content of stones	0.71	Hard to reclaim (rock fragments)	0.00
		Droughty	0.85				
		Carbonate content	0.92			Carbonate content	0.94
		Content of organic matter	0.92				
DfnA:							
Dubois--------------	85	Fair		Poor		Poor	
		Too acid	0.05	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.41
		Water erosion	0.37				
DtvC2:							
Deputy--------------	50	Fair		Poor		Fair	
		Too acid	0.08	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too clayey	0.64
				Depth to bedrock	0.82	Too acid	0.82
		Water erosion	0.68	Shrink-swell	0.87	Slope	0.96
		Too clayey	0.98				
Trappist------------	27	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.00	Too acid	0.59
				Shrink-swell	0.87	Depth to bedrock	0.65
		Too acid	0.50			Slope	0.96
		Depth to bedrock	0.65				
		Water erosion	0.68				
		Droughty	0.72				
EbpD2:							
Eden----------------	82	Poor		Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Low strength	0.00	Too clayey	0.00
		Content of stones	0.04	Shrink-swell	0.12	Rock fragments	0.01
		Depth to bedrock	0.05	Slope	0.68	Depth to bedrock	0.05
		Content of organic matter	0.88	Content of stones	0.83		
EesA:							
Elkinsville---------	52	Fair		Fair		Fair	
		Content of organic matter	0.12	Shrink-swell	0.87	Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
EesA:							
Millstone----------	43	Fair		Good		Fair	
		Content of organic matter	0.12			Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				
EesB:							
Elkinsville---------	52	Fair		Fair		Fair	
		Too acid	0.16	Shrink-swell	0.87	Too acid	0.68
		Content of organic matter	0.32				
		Water erosion	0.90				
Millstone----------	43	Fair		Good		Fair	
		Content of organic matter	0.12			Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				
EesC2:							
Elkinsville---------	44	Fair		Fair		Fair	
		Content of organic matter	0.12	Shrink-swell	0.87	Too acid	0.68
						Slope	0.96
		Too acid	0.16				
		Water erosion	0.90				
Millstone----------	43	Fair		Good		Fair	
		Content of organic matter	0.12			Too acid	0.68
						Slope	0.96
		Too acid	0.16				
		Water erosion	0.90				
EesD2:							
Elkinsville---------	44	Fair		Fair		Poor	
		Content of organic matter	0.12	Shrink-swell	0.87	Slope	0.00
						Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				
Millstone----------	44	Fair		Fair		Poor	
		Content of organic matter	0.12			Slope	0.00
						Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				
EesFQ:							
Elkinsville---------	48	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.87	Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				
Millstone----------	47	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
						Too acid	0.68
		Too acid	0.16				
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
EsaG:							
Eden----------------	74	Poor		Poor		Poor	
		Content of stones	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.76	Slope	0.00	Slope	0.00
		Content of organic matter	0.88	Content of stones	0.00	Depth to bedrock	0.99
				Shrink-swell	0.12		
		Cobbles	0.99	Cobbles	0.37		
		Water erosion	0.99				
		Depth to bedrock	0.99				
GgbG:							
Gilwood-------------	45	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Too acid	0.59
		Depth to bedrock	0.71			Depth to bedrock	0.71
		Droughty	0.81				
		Water erosion	0.99				
Brownstown----------	35	Fair		Poor		Poor	
		Content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.20	Cobbles	0.51	Too acid	0.59
		Too acid	0.50			Depth to bedrock	0.93
		Depth to bedrock	0.93				
		Cobbles	0.98				
GgfD:							
Gilwood-------------	39	Fair		Poor		Poor	
		Content of organic matter	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Slope	0.16
		Too acid	0.50			Too acid	0.59
		Depth to bedrock	0.71			Depth to bedrock	0.71
		Droughty	0.81				
		Water erosion	0.99				
Wrays---------------	38	Fair		Poor		Poor	
		Too acid	0.50	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
		Water erosion	0.68	Depth to bedrock	0.12		
		Content of organic matter	0.88	Shrink-swell	0.98	Slope	0.16
						Too acid	0.59
GgfE2:							
Gilwood-------------	42	Fair		Poor		Poor	
		Content of organic matter	0.12	Depth to bedrock	0.00	Rock fragments	0.00
				Slope	0.50	Slope	0.00
		Too acid	0.50			Too acid	0.59
		Depth to bedrock	0.71			Depth to bedrock	0.71
		Droughty	0.81				
		Water erosion	0.99				
Wrays---------------	36	Fair		Poor		Poor	
		Too acid	0.50	Low strength	0.00	Slope	0.00
		Water erosion	0.68	Depth to bedrock	0.12	Hard to reclaim (rock fragments)	0.00
		Content of organic matter	0.88	Shrink-swell	0.98		
						Too acid	0.59

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
GmaG:							
Gnawbone------------	48	Fair		Poor		Poor	
		Too acid	0.50	Depth to bedrock	0.00	Slope	0.00
		Content of organic matter	0.50	Slope	0.00	Too acid	0.50
				Low strength	0.00	Depth to bedrock	0.99
		Water erosion	0.68				
		Depth to bedrock	0.99				
Kurtz---------------	32	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
		Content of organic matter	0.50	Low strength	0.00	Too acid	0.50
				Depth to bedrock	0.29		
		Water erosion	0.90	Shrink-swell	0.87		
GyaD2:							
Grayford------------	73	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.74	Too acid	0.88
		Too acid	0.32	Shrink-swell	0.78	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Slope	0.92		
GyaD3:							
Grayford------------	78	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.50	Too acid	0.88
		Too acid	0.32	Shrink-swell	0.77	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Slope	0.92		
GyaD5:							
Grayford------------	65	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.18	Too acid	0.88
		Too acid	0.50	Shrink-swell	0.40	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Slope	0.92		
GykD2:							
Grayford------------	69	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.74	Too acid	0.88
		Too acid	0.32	Shrink-swell	0.78	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Slope	0.92		
GykD3:							
Grayford------------	74	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Depth to bedrock	0.50	Too acid	0.88
		Too acid	0.32	Shrink-swell	0.77	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Slope	0.92		
HcaA:							
Hatfield------------	90	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too acid	0.82
		Too acid	0.26				
		Water erosion	0.68				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
HccB2:							
Haubstadt-----------	84	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14		
		Water erosion	0.37				
HcdC2:							
Haubstadt-----------	55	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.59
						Slope	0.96
		Water erosion	0.37				
Shircliff-----------	23	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Wetness	0.14	Wetness	0.14
				Shrink-swell	0.49	Slope	0.63
		Water erosion	0.68				
		Too acid	0.74				
HceC3:							
Haubstadt-----------	55	Fair		Poor		Poor	
		Too acid	0.12	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.59
						Slope	0.96
		Water erosion	0.37				
Shircliff-----------	23	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Wetness	0.14	Wetness	0.14
				Shrink-swell	0.43	Slope	0.63
		Water erosion	0.68				
		Too acid	0.88				
HcgAH:							
Haymond-------------	85	Fair		Good		Good	
		Water erosion	0.37				
		Too acid	0.97				
HcgAV:							
Haymond-------------	85	Fair		Good		Good	
		Water erosion	0.37				
		Too acid	0.97				
HcgAW:							
Haymond-------------	82	Fair		Good		Good	
		Water erosion	0.37				
		Too acid	0.99				
HerE:							
Hickory-------------	45	Fair		Poor		Poor	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.00
				Slope	0.32	Too clayey	0.57
		Too acid	0.54	Shrink-swell	0.99	Too acid	0.98
		Carbonate content	0.92				
		Too clayey	0.98				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
HerE:							
Bonnell-------------	38	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.32	Shrink-swell	0.32	Slope	0.00
		Content of organic matter	0.50			Too acid	0.88
		Water erosion	0.68				
		Carbonate content	0.97				
HtwD2:							
Haggatt-------------	51	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Slope	0.00
				Shrink-swell	0.23	Too acid	0.92
		Too acid	0.50	Slope	0.92		
		Water erosion	0.90				
Caneyville----------	31	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.28	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.54	Shrink-swell	0.12	Depth to bedrock	0.54
		Too acid	0.61	Slope	0.68	Too acid	0.99
		Water erosion	0.90			Rock fragments	0.99
		Content of organic matter	0.92				
HtzD3:							
Haggatt-------------	51	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Slope	0.00
				Shrink-swell	0.14	Too acid	0.92
		Too acid	0.50	Slope	0.92		
		Water erosion	0.99				
		Droughty	0.99				
Caneyville----------	41	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Shrink-swell	0.12	Depth to bedrock	0.10
		Too acid	0.61	Slope	0.68	Rock fragments	0.97
		Content of organic matter	0.92			Too acid	0.99
HufAK:							
Huntington----------	85	Fair		Poor		Good	
		Water erosion	0.99	Low strength	0.00		
HuhD2:							
Haggatt-------------	46	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Slope	0.00
				Shrink-swell	0.23	Too acid	0.92
		Too acid	0.50	Slope	0.92		
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
HuhD2:							
Caneyville----------	31	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.61	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.67	Shrink-swell	0.12	Depth to bedrock	0.93
		Water erosion	0.90	Slope	0.68	Rock fragments	0.99
		Content of organic matter	0.92			Too acid	0.99
		Depth to bedrock	0.93				
HujD3:							
Haggatt-------------	46	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Slope	0.00
				Shrink-swell	0.14	Too acid	0.92
		Too acid	0.50	Slope	0.92		
		Water erosion	0.99				
		Droughty	0.99				
Caneyville----------	39	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Shrink-swell	0.12	Depth to bedrock	0.10
		Too acid	0.61	Slope	0.68	Rock fragments	0.97
		Content of organic matter	0.92			Too acid	0.99
		Water erosion	0.99				
JaeB2:							
Jennings------------	80	Fair		Poor		Fair	
		Too acid	0.03	Low strength	0.00	Too acid	0.88
		Content of organic matter	0.12	Wetness	0.89	Wetness	0.89
				Shrink-swell	0.96		
		Water erosion	0.37				
JafC2:							
Jennings------------	45	Fair		Poor		Fair	
		Too acid	0.03	Low strength	0.00	Too acid	0.88
		Content of organic matter	0.12	Wetness	0.89	Wetness	0.89
				Shrink-swell	0.96	Slope	0.96
		Water erosion	0.37				
Blocher, hard bedrock substratum	30	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Wetness	0.89
				Shrink-swell	0.87	Slope	0.96
		Too acid	0.20	Wetness	0.89		
		Water erosion	0.68				
JafC3:							
Jennings------------	45	Fair		Poor		Fair	
		Too acid	0.03	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.88
				Shrink-swell	0.97	Slope	0.96
		Water erosion	0.37				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
JafC3:							
Blocher, hard bedrock substratum	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.87	Too acid	0.76
		Too acid	0.20	Wetness	0.89	Wetness	0.89
		Water erosion	0.68			Slope	0.96
KxkC2:							
Knobcreek-----------	37	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.22	Too acid	0.88
		Too acid	0.20			Slope	0.96
		Water erosion	0.68				
Navilleton----------	35	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Slope	0.96
		Too acid	0.32	Shrink-swell	0.51	Too acid	0.98
		Water erosion	0.68				
KxlC3:							
Knobcreek-----------	33	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.16	Too acid	0.88
		Too acid	0.20			Slope	0.96
		Water erosion	0.90				
Haggatt-------------	26	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Too acid	0.92
		Too acid	0.50	Shrink-swell	0.14	Slope	0.96
		Water erosion	0.99				
		Droughty	0.99				
Caneyville----------	24	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.10
		Depth to bedrock	0.10	Shrink-swell	0.12	Slope	0.96
		Too acid	0.61			Rock fragments	0.97
		Content of organic matter	0.92			Too acid	0.99
		Water erosion	0.99				
KxlE3:							
Knobcreek-----------	35	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.16	Slope	0.00
		Too acid	0.20	Slope	0.82	Too acid	0.88
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
KxlE3:							
Haggatt-------------	22	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.04	Slope	0.00
				Shrink-swell	0.14	Too acid	0.92
		Too acid	0.50	Slope	0.82		
		Water erosion	0.99				
		Droughty	0.99				
Caneyville----------	21	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Shrink-swell	0.12	Depth to bedrock	0.10
		Too acid	0.61	Slope	0.82	Rock fragments	0.97
		Content of organic matter	0.92			Too acid	0.99
KxmE2:							
Knobcreek-----------	33	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.22	Slope	0.00
				Slope	0.82	Too acid	0.88
		Too acid	0.20				
		Water erosion	0.68				
Haggatt-------------	22	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Slope	0.00
				Shrink-swell	0.23	Too acid	0.92
		Too acid	0.50	Slope	0.82		
		Water erosion	0.90				
Caneyville----------	20	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.61	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.67	Shrink-swell	0.12	Depth to bedrock	0.93
		Water erosion	0.90	Slope	0.82	Rock fragments	0.99
		Content of organic matter	0.92			Too acid	0.99
		Depth to bedrock	0.93				
KxoC2:							
Knobcreek-----------	29	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.22	Too acid	0.88
						Slope	0.96
		Too acid	0.20				
		Water erosion	0.68				
Navilleton----------	28	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.98
				Shrink-swell	0.51		
		Too acid	0.32				
		Water erosion	0.68				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
KxoC2:							
Haggatt-------------	27	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Too acid	0.92
				Shrink-swell	0.23	Slope	0.96
		Too acid	0.50				
		Water erosion	0.90				
KxpD2:							
Knobcreek-----------	35	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Shrink-swell	0.22	Slope	0.00
				Slope	0.98	Too acid	0.88
		Too acid	0.20				
		Water erosion	0.68				
Haggatt-------------	31	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Depth to bedrock	0.12	Slope	0.00
				Shrink-swell	0.23	Too acid	0.92
		Too acid	0.50	Slope	0.98		
		Water erosion	0.90				
Caneyville----------	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.61	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.67	Shrink-swell	0.12	Depth to bedrock	0.93
		Water erosion	0.90	Slope	0.82	Rock fragments	0.99
		Content of organic matter	0.92			Too acid	0.99
		Depth to bedrock	0.93				
LpoAK:							
Lindside------------	82	Fair		Poor		Fair	
		Water erosion	0.90	Low strength	0.00	Wetness	0.14
		Too acid	0.92	Wetness	0.14		
				Shrink-swell	0.95		
McgC2:							
Markland------------	74	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Carbonate content	0.32	Shrink-swell	0.35	Slope	0.96
		Water erosion	0.68				
		Content of organic matter	0.88				
		Too acid	0.88				
McnGQ:							
Markland------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Carbonate content	0.32	Slope	0.00	Too clayey	0.00
		Content of organic matter	0.88	Shrink-swell	0.12		
		Too acid	0.88				
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
McpC3:							
Markland	61	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Carbonate content	0.32	Shrink-swell	0.35	Slope	0.96
		Content of organic matter	0.88				
		Too acid	0.88				
		Water erosion	0.90				
McuDQ:							
Markland	70	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Carbonate content	0.32	Shrink-swell	0.39	Too clayey	0.00
		Content of organic matter	0.88	Slope	0.92		
		Too acid	0.88				
		Water erosion	0.90				
MdqDQ:							
Markland	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Carbonate content	0.32	Shrink-swell	0.35	Too clayey	0.00
		Water erosion	0.68	Slope	0.92		
		Content of organic matter	0.88				
		Too acid	0.88				
MhuA:							
McGary	90	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Carbonate content	0.32	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.50	Shrink-swell	0.27		
		Water erosion	0.68				
MhyA:							
Medora	85	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.24	Wetness	0.24
				Shrink-swell	0.99	Too acid	0.88
		Too acid	0.20				
		Water erosion	0.37				
MhyB2:							
Medora	88	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.24	Wetness	0.24
						Too acid	0.76
		Too acid	0.20			Rock fragments	0.92
		Water erosion	0.37				
MhyC2:							
Medora	73	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.24	Wetness	0.24
						Too acid	0.76
		Too acid	0.20			Rock fragments	0.92
		Water erosion	0.37			Slope	0.96

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
MhyC3:							
Medora	75	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
		Water erosion	0.37	Shrink-swell	0.99	Too acid	0.76
		Too acid	0.50			Rock fragments	0.92
						Slope	0.96
MsvA:							
Montgomery	82	Fair		Poor		Poor	
		Too clayey	0.08	Wetness	0.00	Wetness	0.00
		Carbonate content	0.46	Low strength	0.00	Too clayey	0.06
		Content of organic matter	0.88	Shrink-swell	0.34		
NaaA:							
Nabb	85	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.76
		Water erosion	0.37				
NaaB2:							
Nabb	78	Fair		Poor		Fair	
		Too acid	0.12	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.76
		Water erosion	0.37				
NbhAK:							
Newark	80	Fair		Poor		Poor	
		Water erosion	0.90	Wetness	0.00	Wetness	0.00
				Low strength	0.00		
				Shrink-swell	0.87		
OfbAW:							
Oldenburg	85	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.14	Wetness	0.14
		Water erosion	0.99				
PcrB2:							
Pekin	85	Fair		Fair		Fair	
		Too acid	0.03	Wetness	0.14	Wetness	0.14
		Content of organic matter	0.12			Too acid	0.32
		Water erosion	0.37				
PcrC2:							
Pekin	72	Fair		Poor		Fair	
		Too acid	0.03	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.76
		Water erosion	0.37			Slope	0.96

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
PcrC3:							
Pekin	71	Fair		Poor		Poor	
		Too acid	0.03	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12			Too acid	0.32
						Slope	0.96
		Water erosion	0.37				
PhaA:							
Peoga	83	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
				Low strength	0.00	Too acid	0.68
		Too acid	0.16				
		Water erosion	0.37				
Pml:							
Pits, quarry	85	Not rated		Not rated		Not rated	
Ppu:							
Pits, sand and gravel	80	Not rated		Not rated		Not rated	
RblD3:							
Rarden	78	Poor		Poor		Poor	
		Too clayey	0.00	Wetness	0.00	Wetness	0.00
		Droughty	0.24	Low strength	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too clayey	0.00
		Content of organic matter	0.50	Shrink-swell	0.87	Too acid	0.41
						Depth to bedrock	0.71
		Water erosion	0.68				
		Depth to bedrock	0.71				
RbmD5:							
Rarden	74	Poor		Poor		Poor	
		Droughty	0.00	Wetness	0.00	Wetness	0.00
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.16
				Shrink-swell	0.87	Depth to bedrock	0.21
		Depth to bedrock	0.21			Too acid	0.41
		Too acid	0.50				
RptG:							
Rohan	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.00
		Content of organic matter	0.50			Too acid	0.59
Jessietown	36	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
		Depth to bedrock	0.54	Depth to bedrock	0.00	Too acid	0.50
		Droughty	0.83	Low strength	0.00	Depth to bedrock	0.54
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
RtcA:							
Ryker	95	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.89		
		Too acid	0.32				
		Water erosion	0.68				
RtcB2:							
Ryker	92	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.87		
		Too acid	0.32				
		Water erosion	0.68				
RzrB2:							
Ryker	82	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.87		
		Too acid	0.32				
		Water erosion	0.68				
RztC2:							
Ryker	43	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.86	Slope	0.96
		Too acid	0.32				
		Water erosion	0.68				
Grayford	25	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.88
				Depth to bedrock	0.58	Hard to reclaim (rock fragments)	0.95
		Too acid	0.32	Shrink-swell	0.77		
		Water erosion	0.90			Slope	0.96
RztC3:							
Ryker	44	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.82	Slope	0.96
		Too acid	0.32				
		Water erosion	0.68				
Grayford	28	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.88
				Shrink-swell	0.73	Hard to reclaim (rock fragments)	0.95
		Too acid	0.32	Depth to bedrock	0.74		
		Water erosion	0.90			Slope	0.96
RzvC2:							
Ryker	41	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
				Shrink-swell	0.86		
		Too acid	0.32				
		Water erosion	0.68				
Grayford	26	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.88
				Depth to bedrock	0.58	Hard to reclaim (rock fragments)	0.95
		Too acid	0.32	Shrink-swell	0.77		
		Water erosion	0.90			Slope	0.96

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
RzvC3:							
Ryker	41	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.95
		Too acid	0.32	Shrink-swell	0.82		
		Water erosion	0.68				
Grayford	26	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.88
		Too acid	0.32	Shrink-swell	0.73	Hard to reclaim (rock fragments)	0.95
		Water erosion	0.90	Depth to bedrock	0.74	Slope	0.96
SceB2:							
Scottsburg	96	Fair		Poor		Fair	
		Too acid	0.05	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.76
		Water erosion	0.68	Shrink-swell	0.87		
SfyB:							
Shircliff	75	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Wetness	0.14	Wetness	0.14
		Too acid	0.32	Shrink-swell	0.51		
		Water erosion	0.68				
		Carbonate content	0.68				
SoaB:							
Spickert	95	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.14	Wetness	0.14
		Too acid	0.16	Low strength	0.22	Too acid	0.82
		Water erosion	0.37				
SodB:							
Spickert	90	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.14	Wetness	0.14
		Too acid	0.16	Low strength	0.22	Too acid	0.82
		Water erosion	0.37				
SolC2:							
Spickert	44	Fair		Fair		Fair	
		Content of organic matter	0.12	Wetness	0.14	Wetness	0.14
		Too acid	0.16	Low strength	0.22	Too acid	0.82
		Water erosion	0.37			Slope	0.96
Wrays	32	Fair		Poor		Poor	
		Too acid	0.50	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
		Water erosion	0.68	Depth to bedrock	0.46	Too acid	0.76
		Content of organic matter	0.88	Shrink-swell	0.97	Slope	0.96

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
StaAQ:							
Steff	86	Fair		Poor		Fair	
		Too acid	0.32	Low strength	0.00	Wetness	0.14
		Content of organic matter	0.50	Wetness	0.14	Too acid	0.88
		Water erosion	0.68				
StdAQ:							
Stendal	88	Fair		Poor		Poor	
		Too acid	0.32	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.50	Low strength	0.00	Too acid	0.88
		Water erosion	0.68				
StdAW:							
Stendal	87	Fair		Poor		Poor	
		Too acid	0.32	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.50	Low strength	0.00	Too acid	0.88
		Water erosion	0.68				
ThaC2:							
Trappist	84	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.00	Too acid	0.59
				Shrink-swell	0.87	Depth to bedrock	0.65
		Too acid	0.50			Slope	0.96
		Depth to bedrock	0.65				
		Water erosion	0.68				
		Droughty	0.72				
ThbC3:							
Trappist	75	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Depth to bedrock	0.10	Depth to bedrock	0.00	Depth to bedrock	0.10
		Content of organic matter	0.12	Shrink-swell	0.87	Too acid	0.59
						Slope	0.96
		Droughty	0.13				
		Too acid	0.50				
		Water erosion	0.90				
ThbD5:							
Trappist	73	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.16
		Content of organic matter	0.12			Depth to bedrock	0.54
						Too acid	0.59
		Too acid	0.50				
		Depth to bedrock	0.54				
		Water erosion	0.90				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
ThcD3:							
Trappist------------	44	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.24	Shrink-swell	0.87	Depth to bedrock	0.29
		Depth to bedrock	0.29			Too acid	0.59
		Too acid	0.50				
		Water erosion	0.90				
Rohan---------------	29	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.68	Depth to bedrock	0.00
		Content of organic matter	0.50			Slope	0.00
		Too acid	0.50			Too acid	0.59
ThdD:							
Trappist------------	49	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Shrink-swell	0.87	Too acid	0.59
		Water erosion	0.90			Depth to bedrock	0.90
		Depth to bedrock	0.90				
		Droughty	0.94				
Rohan---------------	33	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.68	Depth to bedrock	0.00
		Content of organic matter	0.50			Slope	0.00
		Too acid	0.50			Too acid	0.59
		Water erosion	0.90				
TsaC3:							
Trappist------------	46	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Depth to bedrock	0.10	Depth to bedrock	0.00	Depth to bedrock	0.10
		Content of organic matter	0.12	Shrink-swell	0.87	Too acid	0.59
		Droughty	0.13			Slope	0.96
		Too acid	0.50				
		Water erosion	0.90				
Deputy--------------	23	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.08	Depth to bedrock	0.07	Wetness	0.14
		Content of organic matter	0.12	Wetness	0.14	Too acid	0.50
		Water erosion	0.68	Shrink-swell	0.87	Slope	0.96
Uaa:							
Udorthents, cut and filled------------	83	Not rated		Not rated		Not rated	

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
UaoAK:							
Udifluvents, cut and filled-------------	65	Not rated		Not rated		Not rated	
Urban land----------	25	Not rated		Not rated		Not rated	
UedA:							
Urban land----------	60	Not rated		Not rated		Not rated	
Aquents, clayey substratum---------	25	Not rated		Not rated		Not rated	
UndAY:							
Urban land----------	65	Not rated		Not rated		Not rated	
Udifluvents---------	25	Not rated		Not rated		Not rated	
UngB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, fragipan substratum---------	30	Not rated		Not rated		Not rated	
UnkB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, silty substratum---------	30	Not rated		Not rated		Not rated	
UnpA:							
Urban land----------	45	Not rated		Not rated		Not rated	
Udarents, loamy substratum---------	30	Not rated		Not rated		Not rated	
UnsB:							
Urban land----------	41	Not rated		Not rated		Not rated	
Udarents, clayey substratum---------	31	Not rated		Not rated		Not rated	
W:							
Water---------------	100	Not rated		Not rated		Not rated	
WaaAV:							
Wakeland------------	83	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
		Water erosion	0.37				
		Too acid	0.99				
WaaAW:							
Wakeland------------	82	Fair		Poor		Poor	
		Content of organic matter	0.12	Wetness	0.00	Wetness	0.00
		Water erosion	0.37				
		Too acid	0.99				

Table 15b.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential as source of reclamation material: Rating class and limiting features	Value	Potential as source of roadfill: Rating class and limiting features	Value	Potential as source of topsoil: Rating class and limiting features	Value
WedB2:							
Weddel	95	Fair		Poor		Fair	
		Content of organic matter	0.12	Low strength	0.00	Wetness	0.14
				Wetness	0.14	Too acid	0.88
		Too acid	0.16	Shrink-swell	0.97		
		Water erosion	0.37				
WhcD:							
Wellrock	50	Fair		Poor		Fair	
		Water erosion	0.37	Low strength	0.00	Slope	0.16
		Too acid	0.50	Depth to bedrock	0.74	Too acid	0.50
		Content of organic matter	0.88				
Gnawbone	41	Fair		Poor		Fair	
		Too acid	0.50	Depth to bedrock	0.00	Slope	0.16
		Content of organic matter	0.50	Low strength	0.00	Too acid	0.50
						Depth to bedrock	0.99
		Water erosion	0.68				
		Depth to bedrock	0.99				
WnmA:							
Whitcomb	87	Poor		Poor		Poor	
		Too acid	0.00	Wetness	0.00	Wetness	0.00
		Content of organic matter	0.12	Low strength	0.00	Too acid	0.32
				Shrink-swell	0.92		
		Water erosion	0.37				
WokAV:							
Wilbur	78	Fair		Fair		Fair	
		Water erosion	0.37	Wetness	0.14	Wetness	0.14
		Content of organic matter	0.88				
		Too acid	0.99				
WokAW:							
Wilbur	83	Fair		Fair		Fair	
		Water erosion	0.37	Wetness	0.14	Wetness	0.14
		Content of organic matter	0.88				
		Too acid	0.99				
WprAW:							
Wirt	83	Fair		Good		Good	
		Content of organic matter	0.50				
		Water erosion	0.99				

Table 16.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated. The representative values for USDA texture and Unified and AASHTO classifications are designated with an asterisk. The representative value is the one that occurs most commonly)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
AddA:												
Avonburg	0-11	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-90	23-40	3-15
	11-21	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	90-100	80-85	23-40	3-15
	21-37	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-90	25-45	5-20
	37-52	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-95	75-85	25-45	5-20
	52-83	Silt loam*	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-95	70-80	25-45	5-20
	83-90	Clay loam*	CL*	A-7-6*, A-6	0-1	0-1	90-100	85-95	70-90	55-70	36-48	15-25
AddB2:												
Avonburg	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-90	23-40	3-15
	7-16	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-85	23-40	3-15
	16-32	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-90	25-45	5-20
	32-42	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-95	75-85	25-45	5-20
	42-63	Silt loam*	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-95	70-80	25-45	5-20
	63-80	Clay loam*	CL*	A-7-6*, A-6	0-1	0-1	90-100	85-95	70-90	55-70	36-48	15-25
BbhA:												
Bartle	0-8	Silt loam*	CL-ML*, ML	A-4*	0	0	100	100	90-100	80-95	18-24	3-7
	8-17	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-95	20-26	3-8
	17-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	85-95	24-38	7-14
	30-50	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-95	24-38	7-14
	50-80	Silt loam*, loam, silty clay loam.	CL*, CL-ML	A-4*, A-6	0	0	100	100	85-100	60-95	24-38	7-14

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
BcrAQ:												
Beanblossom-----	0-5	Silt loam*	CL-ML*, ML	A-4*	0	0-2	90-100	85-100	70-100	50-90	18-30	2-10
	5-24	Silt loam*, very channery silt loam, loam, very channery loam.	CL-ML*, GC, GC-GM, ML	A-4*, A-2-4	0	0-35	40-95	35-90	30-90	20-80	16-30	3-10
	24-54	Extremely channery loam*, extremely channery silt loam, stratified extremely channery loam to very channery silt loam to extremely channery silt loam.	GC-GM*, GC, GM, GW-GM	A-1-b*, A-1-a, A-2-4, A-2-6, A-4	0	0-30	15-55	10-50	8-50	6-45	20-32	NP-12
	54-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
BcrAW:												
Beanblossom-----	0-5	Silt loam*	CL-ML*, ML	A-4*	0	0-2	90-100	85-100	70-100	50-90	18-30	2-10
	5-24	Silt loam*, very channery silt loam, loam, very channery loam.	CL-ML*, GC, GC-GM, ML	A-4*, A-2-4	0	0-35	40-95	35-90	30-90	20-80	16-30	3-10
	24-54	Extremely channery loam*, extremely channery silt loam, stratified extremely channery loam to very channery silt loam to extremely channery silt loam.	GC-GM*, GC, GM, GW-GM	A-1-b*, A-2-4, A-2-6, A-4, A-1-A	0	0-30	15-55	10-50	8-50	6-45	20-32	NP-12
	54-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BdoA:												
Bedford---------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	9-24	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	25-50	6-30
	24-51	Silty clay loam*, silt loam, gravelly silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-10	60-100	55-95	55-95	50-95	25-50	6-30
	51-80	Clay*, silty clay, gravelly clay.	CH*, CL	A-7-6*	0	0-5	60-100	55-95	55-95	50-90	44-75	20-46
BdoB:												
Bedford---------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	9-24	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	25-50	6-30
	24-51	Silty clay loam*, silt loam, gravelly silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-10	60-100	55-95	55-95	50-95	25-50	6-30
	51-80	Clay*, silty clay, gravelly clay.	CH*, CL	A-7-6*	0	0-5	60-100	55-95	55-95	50-90	44-75	20-46
BfbC2:												
Blocher, soft bedrock substratum-----	0-8	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	95-100	90-100	80-90	23-40	3-15
	8-20	Silt loam*, loam, clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	95-100	80-100	65-90	26-48	5-27
	20-61	Clay*, clay loam, silty clay.	CH*, CL	A-7-6*	0	0-5	90-100	85-95	75-95	60-90	43-60	21-35
	61-80	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BfbC2:												
Weddel----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	95-100	90-100	80-95	23-40	3-15
	8-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-50	6-30
	30-50	Silt loam*, silty clay loam, clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	90-100	85-95	75-95	60-90	25-45	5-25
	50-62	Silty clay loam*, clay, clay loam.	CL*, CH	A-7*	0	0	85-98	80-95	70-95	55-90	40-60	15-30
	62-67	Parachannery silty clay*, very parachannery silty clay, parachannery silty clay loam, very parachannery silty clay loam.	CH*, CL	A-7*	0	0-2	95-100	90-100	85-100	80-95	40-60	15-32
	67-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
BfcC3:												
Blocher, soft bedrock substratum-----	0-6	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	95-100	90-100	80-90	33-48	12-27
	6-11	Clay loam*	CL*	A-6*, A-7-6	0	0	98-100	95-100	85-100	65-80	25-42	10-27
	11-61	Clay*, clay loam, silty clay.	CH*, CL	A-7-6*	0	0-5	90-100	85-95	75-95	60-90	43-60	21-35
	61-80	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BfcC3:												
Weddel----------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	95-100	90-100	80-95	25-40	5-15
	6-17	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-50	6-30
	17-38	Silt loam*, silty clay loam, clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	90-100	85-95	75-95	60-90	25-45	5-25
	38-55	Silty clay loam*, clay, clay loam.	CL*, CH	A-7*	0	0	85-98	80-95	70-95	55-90	40-60	15-30
	55-61	Parachannery silty clay*, very parachannery silty clay, parachannery silty clay loam, very parachannery silty clay loam.	CH*, CL	A-7*	0	0-2	95-100	90-100	85-100	80-95	40-60	15-32
	61-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
BnyD3:												
Bonnell---------	0-3	Clay loam*	CL*	A-6*, A-7-6	0	0-2	98-100	95-100	80-95	60-80	32-44	12-22
	3-32	Clay*, clay loam	CL*, CH	A-7-6*	0	0-2	95-100	90-95	80-95	65-90	30-54	20-33
	32-54	Clay loam*, loam	CL*	A-6*, A-7-6	0	0-2	95-100	90-95	75-95	55-75	35-45	15-25
	54-80	Loam*, clay loam	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-2	90-100	85-95	70-95	50-65	20-43	4-20
BobE5:												
Bonnell---------	0-3	Clay loam*	CL*	A-6*, A-7-6	0	0-2	98-100	95-100	80-95	65-80	32-44	12-22
	3-25	Clay*, clay loam	CL*, CH	A-7-6*	0	0-2	95-100	90-95	80-95	65-90	30-54	20-33
	25-38	Clay loam*, loam	CL*	A-6*, A-7-6	0	0-2	95-100	90-95	75-95	55-75	35-45	15-25
	38-60	Loam*, clay loam	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-2	90-100	85-95	70-95	50-65	20-43	4-20
Hickory---------	0-3	Clay loam*	CL*	A-6*, A-7-6	0	0-2	95-100	90-98	80-95	60-75	32-44	12-22
	3-35	Clay loam*, loam	CL*	A-6*, A-7-6	0-1	0-5	90-100	85-100	70-95	50-80	24-50	8-30
	35-40	Loam*, clay loam	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0-1	0-5	90-100	80-95	70-95	45-75	20-40	5-20
	40-60	Loam*, clay loam	CL*, CL-ML, SC, SC-SM	A-4*, A-2, A-6	0-1	0-5	90-100	80-95	50-95	30-75	20-40	5-20

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BodAW:												
Bonnie----------	0-8	Silt loam*	CL*	A-4*, A-6	0	0	100	100	95-100	90-100	27-34	8-12
	8-38	Silt loam*	CL*	A-4*, A-6	0	0	100	100	95-100	90-100	27-34	8-12
	38-60	Silt loam*, silty clay loam.	CL*	A-4*, A-6	0	0	100	100	90-100	80-100	25-39	8-15
BvoG:												
Brownstown------	0-6	Silt loam*, channery silt loam.	ML*, CL-ML, GC-GM, GM	A-4*, A-2-4	0	0-10	55-100	50-100	45-100	34-95	0-25	NP-7
	6-18	Channery silt loam*, very channery silt loam, extremely channery silt loam.	GM*, CL-ML, GC-GM, ML	A-4*, A-2-4	0-10	10-50	40-80	35-75	30-75	25-70	0-25	NP-7
	18-36	Extremely channery silt loam*.	GM*, GC-GM	A-2-4*, A-1, A-4	0-30	30-55	30-60	25-55	25-55	15-45	0-25	NP-7
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
Gilwood---------	0-6	Silt loam*, channery silt loam.	CL-ML*, CL, ML, GC-GM, GM	A-4*	0	0-5	60-100	55-100	50-100	40-95	18-25	3-8
	6-11	Channery silt loam*, silt loam.	CL-ML*, CL, GC-GM, GC	A-4*	0	0-10	60-100	55-95	50-95	40-95	22-28	5-9
	11-22	Channery silt loam*.	CL*, CL-ML, GC, GC-GM	A-4*, A-6	0-5	0-10	60-80	55-75	50-75	40-75	24-32	6-12
	22-32	Extremely channery silt loam*, very channery silt loam.	GC-GM*, CL-ML, GC, GM, ML	A-2-4*, A-1-b, A-4	0-10	10-40	35-65	30-55	25-55	15-55	18-30	3-10
	32-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
CcaG:												
Caneyville------	0-8	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0-2	0-3	95-100	95-100	90-100	80-100	20-40	2-17
	8-14	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0-2	0-3	95-100	95-100	90-100	85-100	30-50	11-29
	14-33	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	33-60	Bedrock*			---	---	---	---	---	---	---	---
Rock outcrop.												

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CkkB2:												
Cincinnati------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	23-40	3-15
	8-31	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	80-95	24-45	5-25
	31-72	Silt loam*, loam	CL*	A-6*, A-4	0	0	98-100	95-100	85-95	55-80	24-44	8-25
	72-80	Clay loam*, loam	CL*	A-6*, A-4, A-7-6	0	0-2	90-100	85-95	70-90	55-75	25-50	8-30
CldC2:												
Cincinnati------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	23-40	3-15
	8-24	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	80-95	24-45	5-25
	24-74	Silt loam*, loam	CL*	A-6*, A-4	0	0	98-100	95-100	85-95	55-85	24-44	8-25
	74-80	Clay loam*, loam	CL*	A-6*, A-4, A-7-6	0	0-2	90-100	85-95	70-90	55-70	25-50	8-30
Blocher---------	0-7	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	90-100	80-90	23-40	3-15
	7-17	Silty clay loam*, silt loam, loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	80-100	65-90	24-48	5-27
	17-44	Clay*, clay loam	CL*, CH	A-7-6*, A-6	0	0	90-100	85-95	75-95	60-75	30-53	11-33
	44-76	Clay loam*, clay	CL*	A-6*, A-7-6	0	0-2	95-100	90-95	75-95	60-75	25-50	11-30
	76-80	Loam*, clay loam	CL*, CL-ML	A-6*, A-4	0	0-2	95-100	90-95	75-90	55-70	19-40	4-20
CldC3:												
Cincinnati------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	23-40	3-15
	5-14	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	80-95	24-45	5-25
	14-35	Silt loam*, loam	CL*	A-6*, A-4	0	0	98-100	95-100	85-95	55-85	24-40	8-24
	35-78	Clay loam*, loam	CL*	A-6*, A-4, A-7-6	0	0-2	90-100	85-95	70-90	55-70	25-50	5-30
	78-84	Loam*, clay loam	CL*, CL-ML	A-4*, A-6	0	0-2	95-100	90-95	75-90	55-70	19-40	4-20
Blocher---------	0-5	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	90-100	80-90	24-40	3-15
	5-18	Silty clay loam*, silt loam, loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	80-100	65-90	24-48	5-27
	18-47	Clay*, clay loam	CL*, CH	A-7-6*, A-6	0	0	90-100	85-95	75-95	60-75	30-53	11-33
	47-64	Clay loam*, clay	CL*	A-6*, A-7-6	0	0-2	95-100	90-95	75-95	60-75	25-50	11-30
	64-80	Loam*, clay loam	CL*, CL-ML	A-6*, A-4	0	0-2	95-100	90-95	75-90	55-70	19-40	4-20

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ClfA:												
Cobbsfork-------	0-12	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-90	23-40	3-15
	12-18	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-90	23-40	3-16
	18-38	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-90	25-45	5-20
	38-50	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-90	25-45	5-20
	50-85	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	95-100	90-100	75-90	25-40	5-20
	85-90	Clay loam*	CL*	A-6*, A-7-6	0	0	90-100	85-95	70-90	55-70	28-50	10-30
ComC:												
Coolville-------	0-8	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	90-100	85-100	24-40	3-15
	8-21	Silty clay loam*	CL*	A-7*, A-6	0	0	95-100	95-100	90-100	85-100	35-50	15-25
	21-37	Silty clay*, silty clay loam.	CH*, CL, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	37-44	Parachannery silty clay loam*, parachannery silty clay, very parachannery silty clay, extremely parachannery silty clay loam.	CL*, CH, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
ConC3:												
Coolville-------	0-4	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	90-100	85-100	24-40	3-15
	4-17	Silty clay loam*	CL*	A-7*, A-6	0	0	95-100	95-100	90-100	85-100	35-50	15-25
	17-38	Silty clay*, silty clay loam.	CH*, CL, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	38-43	Parachannery silty clay loam*, parachannery silty clay, very parachannery silty clay, extremely parachannery silty clay loam.	CL*, CH, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	43-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ConC3:												
Rarden----------	0-6	Silty clay loam*	CL*	A-6*, A-7	0	0	100	95-100	95-100	85-100	30-50	12-30
	6-28	Silty clay*, clay, silty clay loam.	CH*, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-100	41-70	13-45
	28-37	Extremely parachannery silty clay*, parachannery silty clay, extremely parachannery silty clay loam, parachannery silty clay loam.	CH*, CL, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-95	41-65	13-36
	37-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
ConD:												
Coolville-------	0-5	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	90-100	85-100	24-40	3-15
	5-18	Silty clay loam*	CL*	A-7*, A-6	0	0	95-100	95-100	90-100	85-100	35-50	15-25
	18-39	Silty clay*, silty clay loam.	CH*, CL, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	39-45	Parachannery silty clay loam*, parachannery silty clay, very parachannery silty clay, extremely parachannery silty clay loam.	CL*, CH, ML	A-7*	0	0-5	95-100	85-100	80-100	75-100	41-65	13-36
	45-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ConD:												
Rarden----------	0-4	Silty clay loam*	CL*	A-6*, A-7	0	0	100	95-100	95-100	85-100	30-50	12-30
	4-28	Silty clay*, clay, silty clay loam.	CH*, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-100	41-70	13-45
	28-36	Extremely parachannery silty clay*, parachannery silty clay, extremely parachannery silty clay loam, parachannery silty clay loam.	CH*, CL, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-95	41-65	13-36
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
CspA:												
Crider----------	0-9	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	9-43	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	43-80	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
CspB2:												
Crider----------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	7-36	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	36-80	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
CtrB2:												
Crider----------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	7-36	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	36-75	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
	75-100	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CtwB:												
Crider----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	8-34	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	100	95-100	95-100	85-100	23-50	3-29
	34-46	Silty clay loam*, silt loam.	CL*	A-6*	0-5	0-5	90-100	90-100	85-100	80-95	30-40	10-16
	46-80	Clay*, silty clay, silty clay loam.	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	75-100	70-95	45-65	16-42
Bedford---------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	9-24	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	25-50	6-30
	24-51	Silty clay loam*, silt loam, gravelly silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-10	60-100	55-95	55-95	50-95	25-50	6-30
	51-80	Clay*, silty clay, gravelly clay.	CH*, CL	A-7-6*	0	0-5	60-100	55-95	55-95	50-90	44-75	20-46
Navilleton------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	8-35	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	23-50	3-29
	35-65	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	65-79	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	79-83	Bedrock*	---	---	---	---	---	---	---	---	---	---
CwaAQ:												
Cuba------------	0-10	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	95-100	90-100	80-98	20-38	4-15
	10-47	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	95-100	90-100	80-98	22-38	5-15
	47-60	Silt loam*, stratified silt loam to loam to sandy loam.	CL*, ML, SC, SM	A-4*, A-2, A-2-4, A-6	0	0	90-100	80-100	50-100	25-98	15-38	2-15
CxgC3:												
Crider----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	24-40	4-17
	7-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	30-80	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
CxgC3:												
Haggatt---------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	90-100	85-100	80-100	60-100	25-48	4-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
CxhC2:												
Crider----------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	7-36	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	36-80	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
Haggatt---------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
CxmC2:												
Crider----------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	7-43	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	43-75	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
	75-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
Haggatt---------	0-5	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CxnC3:												
Crider----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	24-40	4-17
	7-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	97-100	95-100	85-100	24-50	4-29
	30-75	Clay*, silty clay	CH*, CL	A-7*	0-5	0-5	80-100	80-100	75-100	70-100	44-75	20-46
	75-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
Haggatt---------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	90-100	85-100	80-100	60-100	25-48	4-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
DbrG:												
Deam------------	0-3	Silty clay loam*	CL*	A-6*, A-7	0	0	100	100	90-100	90-100	32-42	12-20
	3-24	Silty clay*, silty clay loam.	CL*, CH	A-7*	0	0	90-100	90-100	90-100	85-100	40-52	17-28
	24-36	Very parachannery silty clay*, extremely parachannery silty clay loam, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	90-100	90-100	90-100	85-100	38-52	15-28
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
DdsAW:												
Dearborn--------	0-10	Silt loam*, loam	CL*, CL-ML	A-6*, A-4	0-8	0-15	90-100	85-95	70-95	50-85	22-40	4-16
	10-16	Channery loam*, loam, clay loam, flaggy loam, channery sandy loam, sandy loam.	CL*, SC, SM, ML	A-6*, A-4, A-2-4	0-25	5-40	70-100	70-95	45-90	25-70	14-40	2-18
	16-60	Extremely channery sandy clay loam*, stratified extremely channery sandy loam to very channery sandy clay loam to extremely flaggy coarse sandy loam.	GC-GM*, GC, SC, SM, GM, SC-SM	A-1-b*, A-2-4, A-2-6, A-1-A	5-40	20-70	45-80	40-75	25-65	12-45	10-37	1-16
DfnA:												
Dubois----------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	1-17
	10-17	Silt loam*	ML*, CL, CL-ML	A-4*, A-6	0	0	100	100	90-100	75-95	23-40	2-15
	17-38	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-100	24-50	4-30
	38-82	Silt loam*, silty clay loam, loam.	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	70-95	20-40	7-25
	82-96	Silty clay loam*, silt loam, clay loam, fine sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-2, A-4, A-7-6	0	0	98-100	95-100	60-100	30-95	20-50	6-25
DtvC2:												
Deputy----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	90-100	22-40	3-15
	8-27	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	25-50	5-25
	27-53	Silty clay*, clay	CL*, CH	A-7-6*	0	0	90-100	85-100	80-100	75-95	40-60	15-30
	53-77	Weathered bedrock*.	---	---	---	---	---	---	---	---	---	---
	77-87	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
DtvC2:												
Trappist--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-95	20-35	2-14
	7-24	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	24-31	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	31-41	Bedrock*	---	---	---	---	---	---	---	---	---	---
EbpD2:												
Eden------------	0-5	Silty clay loam*, flaggy silty clay.	CL*	A-7-6*, A-6	0-20	0-30	75-100	75-100	70-100	65-95	35-50	18-30
	5-23	Flaggy silty clay*, flaggy clay, silty clay.	CH*, CL	A-7-6*	8-25	15-45	70-100	70-95	65-95	65-95	44-69	20-47
	23-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
EesA:												
Elkinsville-----	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	8-38	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-95	25-50	5-28
	38-75	Loam*, clay loam, sandy clay loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	95-100	90-100	55-100	35-80	24-38	7-14
	75-80	Stratified loam to sandy loam to sandy clay loam*.	CL*, CL-ML, SC, SC-SM	A-4*, A-2-4, A-6	0	0	95-100	90-100	55-100	25-80	22-35	5-12

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
EesA:												
Millstone-------	0-12	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	12-59	Loam*, fine sandy loam, clay loam, sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	90-100	80-100	60-100	35-75	20-40	5-18
	59-80	Loam*, very fine sandy loam, gravelly sandy loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-2-4, A-6	0	0	80-100	50-100	30-100	15-75	15-30	2-11
EesB:												
Elkinsville-----	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	8-34	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-95	25-50	5-28
	34-60	Loam*, clay loam, sandy clay loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	95-100	90-100	55-100	35-80	24-38	7-14
	60-80	Stratified loam to sandy loam to sandy clay loam*.	CL*, CL-ML, SC, SC-SM	A-4*, A-2-4, A-6	0	0	95-100	90-100	55-100	25-80	22-35	5-12
Millstone-------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	10-62	Loam*, fine sandy loam, clay loam, sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	90-100	80-100	60-100	35-75	20-40	5-18
	62-80	Loam*, very fine sandy loam, gravelly sandy loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-2-4, A-6	0	0	80-100	50-100	30-100	15-75	15-30	2-11
EesC2:												
Elkinsville-----	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	7-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	75-95	25-50	5-28
	30-56	Loam*, clay loam, sandy clay loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	95-100	90-100	55-100	35-80	24-38	7-14
	56-80	Stratified loam to sandy loam to sandy clay loam*.	CL*, CL-ML, SC, SC-SM	A-4*, A-2-4, A-6	0	0	95-100	90-100	55-100	25-80	22-35	5-12

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
EesC2:												
Millstone-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	7-58	Loam*, fine sandy loam, clay loam, sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	90-100	80-100	60-100	35-75	20-40	5-18
	58-80	Loam*, very fine sandy loam, gravelly sandy loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-2-4, A-6	0	0	80-100	50-100	30-100	15-75	15-30	2-11
EesD2:												
Elkinsville-----	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	7-30	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	75-95	25-50	5-28
	30-56	Loam*, clay loam, sandy clay loam.	CL*, SC-SM, CL-ML, SC	A-6*, A-4	0	0	95-100	90-100	55-100	35-80	24-38	7-14
	56-80	Stratified loam to sandy loam to sandy clay loam*.	CL*, SC-SM, SC, CL-ML	A-4*, A-2-4, A-6	0	0	95-100	90-100	55-100	25-80	22-35	5-12
Millstone-------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	7-58	Loam*, fine sandy loam, clay loam, sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	90-100	80-100	60-100	35-75	20-40	5-18
	58-80	Loam*, very fine sandy loam, gravelly sandy loam.	CL-ML*, SM, CL, ML, SC	A-4*, A-2-4, A-6	0	0	80-100	50-100	30-100	15-75	15-30	2-11
EesFQ:												
Elkinsville-----	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	5-24	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-95	25-50	5-28
	24-50	Loam*, clay loam, sandy clay loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	95-100	90-100	55-100	35-80	24-38	7-14
	50-80	Stratified loam to sandy loam to sandy clay loam*.	CL*, SC, SC-SM, CL-ML	A-4*, A-2-4, A-6	0	0	95-100	90-100	55-100	25-80	22-35	5-12

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
EesFQ:												
Millstone-------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-95	22-40	2-15
	6-54	Loam*, fine sandy loam, clay loam, sandy loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0	0	90-100	80-100	60-100	35-75	20-40	5-18
	54-80	Loam*, very fine sandy loam, gravelly sandy loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-2-4, A-6	0	0	80-100	50-100	30-100	15-75	15-30	2-11
EsaG:												
Eden------------	0-6	Silty clay loam*, flaggy silty clay.	CL*	A-7-6*, A-6	0-20	0-30	75-100	75-100	70-100	65-95	35-50	18-28
	6-11	Flaggy silty clay*, silty clay, flaggy clay.	CH*, CL	A-7-6*	8-25	15-45	70-100	70-95	65-95	65-95	44-69	20-47
	11-39	Flaggy silty clay*, flaggy clay, silty clay.	CH*, CL	A-7-6*	8-25	15-45	70-100	70-95	65-95	65-95	44-69	20-47
	39-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GgbG:												
Gilwood---------	0-6	Silt loam*, channery silt loam.	CL-ML*, CL, ML, GC-GM, GM	A-4*	0	0-5	60-100	55-100	50-100	40-95	18-25	3-8
	6-11	Channery silt loam*, silt loam.	CL-ML*, CL, GC-GM, GC	A-4*	0	0-10	60-100	55-95	50-95	40-95	22-28	5-9
	11-22	Channery silt loam*.	CL*, CL-ML, GC, GC-GM	A-4*, A-6	0-5	0-10	60-80	55-75	50-75	40-75	24-32	6-12
	22-32	Extremely channery silt loam*, very channery silt loam.	GC-GM*, CL-ML, GC, GM, ML	A-2-4*, A-1-b, A-4	0-10	10-40	35-65	30-55	25-55	15-55	18-30	3-10
	32-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GgbG:												
Brownstown------	0-6	Silt loam*, channery silt loam.	ML*, CL-ML, GC-GM, GM	A-4*, A-2-4	0	0-10	55-100	50-100	45-100	34-95	0-25	NP-7
	6-18	Channery silt loam*, very channery silt loam, extremely channery silt loam.	GM*, CL-ML, GC-GM, ML	A-4*, A-2-4	0-10	10-50	40-80	35-75	30-75	25-70	0-25	NP-7
	18-36	Extremely channery silt loam*.	GM*, GC-GM	A-2-4*, A-1, A-4	0-30	30-55	30-60	25-55	25-55	15-45	0-25	NP-7
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GgfD:												
Gilwood---------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*	0	0-5	90-100	85-100	80-100	70-100	18-25	3-8
	6-11	Channery silt loam*, silt loam.	CL-ML*, CL, GC-GM, GC	A-4*	0	0-10	60-100	55-95	50-95	40-95	22-28	5-9
	11-22	Channery silt loam*.	CL*, CL-ML, GC, GC-GM	A-4*, A-6	0-5	0-10	60-80	55-75	50-75	40-75	24-32	6-12
	22-32	Extremely channery silt loam*, very channery silt loam.	GC-GM*, CL-ML, GC, GM, ML	A-2-4*, A-1-b, A-4	0-10	10-40	35-65	30-55	25-55	15-55	18-30	3-10
	32-42	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
GgfD:												
Wrays-----------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	90-100	22-35	2-12
	6-25	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	90-100	30-50	12-30
	25-34	Silty clay loam*, channery silty clay loam, silt loam, channery silt loam.	CL*, GC	A-6*, A-4, A-7-6	0	0-10	65-100	60-95	55-95	45-90	30-44	8-20
	34-44	Extremely channery silt loam*, extremely channery silty clay loam, channery silt loam, channery silty clay loam.	GC*, CL, GM, ML	A-2-4*, A-2-6, A-4, A-6	0-10	10-40	35-85	30-80	25-80	15-75	18-38	3-14
	44-54	Bedrock*	---	---	---	---	---	---	---	---	---	---
GgfE2:												
Gilwood---------	0-6	Silt loam*	CL-ML*, ML, CL	A-4*	0	0-5	85-100	85-100	80-100	70-100	18-25	3-8
	6-11	Channery silt loam*, silt loam.	CL-ML*, GC, GC-GM, CL	A-4*	0	0-10	60-100	55-95	50-95	40-95	22-28	5-9
	11-22	Channery silt loam*.	CL*, GC, CL-ML, GC-GM	A-4*, A-6	0-5	0-10	60-80	55-75	50-75	40-75	24-32	6-12
	22-32	Extremely channery silt loam*, very channery silt loam.	GC-GM*, CL-ML, GC, GM, ML	A-2-4*, A-1-b, A-4	0-10	10-40	35-65	30-55	25-55	15-55	18-30	3-10
	32-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GgfE2:												
Wrays-----------	0-6	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	95-100	90-100	23-35	3-12
	6-25	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	90-100	30-50	12-30
	25-34	Silty clay loam*, channery silty clay loam, silt loam, channery silt loam.	CL*, GC	A-6*, A-4, A-7-6	0	0-10	65-100	60-95	55-95	45-90	30-44	8-20
	34-44	Extremely channery silt loam*, extremely channery silty clay loam, channery silt loam, channery silty clay loam.	GC*, ML, CL, GM	A-4*, A-2-4, A-2-6, A-6	0-10	10-40	35-85	30-80	25-80	15-75	18-38	3-14
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GmaG:												
Gnawbone--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	95-100	90-100	90-100	80-95	16-25	2-8
	7-27	Parachannery silty clay loam*, parachannery silt loam, silty clay loam, silt loam.	CL*	A-6*, A-4, A-7	0	0-3	85-100	80-100	80-100	70-95	30-44	8-20
	27-39	Extremely parachannery silt loam*, very parachannery silt loam, parachannery silty clay loam, very parachannery silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7	0-1	0-5	85-100	80-100	80-100	70-95	20-42	7-18
	39-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GmaG:												
Kurtz-----------	0-6	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	90-100	90-100	85-100	75-100	20-35	3-12
	6-36	Silty clay loam*, silt loam, parachannery silty clay loam, parachannery silt loam.	CL*	A-6*, A-4, A-7	0	0-3	90-100	90-99	85-99	75-99	30-50	8-25
	36-47	Extremely parachannery silty clay loam*, very parachannery silty clay loam, extremely parachannery silt loam, very parachannery silt loam.	CL*	A-6*, A-4, A-7	0-1	0-3	90-100	90-99	85-99	75-99	30-46	8-23
	47-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GyaD2:												
Grayford--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-100	22-40	3-17
	7-16	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	16-45	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	45-52	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	52-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GyaD3:												
Grayford--------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	24-40	4-17
	7-12	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	12-42	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	42-49	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	49-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
GyaD5:												
Grayford--------	0-2	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	24-40	4-17
	2-24	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	24-45	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	45-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GykD2:												
Grayford--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-100	22-40	3-17
	7-16	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	16-45	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	45-52	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	52-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
GykD3:												
Grayford--------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	24-40	4-17
	7-12	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	12-42	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	42-49	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	49-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
HcaA:												
Hatfield--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	95-100	90-100	85-100	75-95	22-39	2-15
	7-20	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	85-100	75-95	24-40	4-18
	20-36	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	95-100	90-100	85-100	75-95	26-50	5-26
	36-78	Silty clay loam*, silt loam, loam.	CL*	A-6*, A-4, A-7-6	0	0	95-100	90-100	75-100	55-95	24-44	8-24
	78-83	Silt loam*, silty clay loam, loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	95-100	90-100	75-100	55-100	20-44	5-24

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HccB2:												
Haubstadt-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	2-16
	7-32	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-100	23-45	4-19
	32-61	Silt loam*, silty clay loam, loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	60-95	25-40	4-16
	61-80	Silty clay loam*, clay loam, loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-7-6, A-4	0	0	90-100	85-100	65-100	45-95	20-45	4-25
HcdC2:												
Haubstadt-------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	2-16
	5-29	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-100	23-45	4-19
	29-58	Silt loam*, silty clay loam, loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	60-95	25-40	4-16
	58-80	Silty clay loam*, clay loam, loam.	CL*, SC-SM, CL-ML, SC	A-6*, A-7-6, A-4	0	0	90-100	85-100	65-100	45-95	20-45	4-25
Shircliff-------	0-7	Silt loam*	CL-ML*, CL	A-4*, A-6	0	0	100	100	95-100	90-100	22-40	5-20
	7-13	Silty clay loam*, silt loam.	CL*	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	26-50	8-30
	13-38	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-65	20-40
	38-49	Silty clay loam*, silty clay.	CL*, CH	A-7-6*, A-6	0	0	100	100	95-100	90-100	32-55	12-30
	49-60	Stratified silty clay loam to silty clay to silt loam*.	CL*, CL-ML, CH	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	16-55	5-30
HceC3:												
Haubstadt-------	0-6	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	4-16
	6-17	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-100	23-45	4-19
	17-47	Silt loam*, silty clay loam, loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	60-95	25-40	4-16
	47-80	Silty clay loam*, clay loam, loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-7-6, A-4	0	0	90-100	85-100	65-100	45-95	20-45	4-25

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HceC3:												
Shircliff-------	0-6	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	95-100	90-100	30-50	10-30
	6-38	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-65	20-40
	38-45	Silty clay loam*, silty clay.	CL*, CH	A-7-6*, A-6	0	0	100	100	95-100	90-100	32-55	12-30
	45-60	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	16-55	5-30
HcgAH:												
Haymond---------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	85-100	20-30	3-10
	10-44	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	20-30	3-10
	44-60	Silt loam*, stratified silt loam to sandy loam to loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15
HcgAV:												
Haymond---------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	85-100	20-30	3-10
	10-44	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	20-30	3-10
	44-60	Silt loam*, stratified silt loam to sandy loam to loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15
HcgAW:												
Haymond---------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	85-100	20-30	3-10
	9-44	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	20-30	3-10
	44-60	Silt loam*, stratified silt loam to sandy loam to loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
HerE:												
Hickory---------	0-11	Loam*	CL-ML*, CL, ML	A-4*, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	11-39	Clay loam*, loam	CL*	A-6*, A-7-6	0-1	0-5	90-100	85-100	70-95	50-80	24-50	8-30
	39-45	Loam*, clay loam	CL*, SC, SC-SM, CL-ML	A-6*, A-4	0-1	0-5	90-100	80-95	70-95	45-75	20-40	5-20
	45-60	Loam*, clay loam, sandy loam.	CL*, SC, CL-ML, SC-SM	A-4*, A-2, A-6	0-1	0-5	90-100	80-95	50-95	30-75	20-40	5-20
Bonnell---------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	85-100	65-90	24-34	3-12
	6-9	Silt loam*, loam, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	95-100	85-100	60-90	25-50	6-28
	9-44	Clay*, clay loam	CL*, CH	A-7-6*	0-1	0-2	95-100	90-95	80-95	65-90	30-54	20-33
	44-70	Clay loam*, loam	CL*	A-6*, A-7-6	0-1	0-2	95-100	90-95	75-95	55-75	35-45	15-25
	70-80	Loam*, clay loam	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-1	90-100	85-95	70-95	50-65	20-43	4-20
HtwD2:												
Haggatt---------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
Caneyville------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0-2	0-3	90-100	85-100	80-100	60-100	22-40	1-17
	6-10	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0-2	0-3	95-100	95-100	90-100	85-100	30-50	11-29
	10-30	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	30-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
HtzD3:												
Haggatt---------	0-5	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	90-100	85-100	80-100	60-100	24-48	5-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HtzD3:												
Caneyville------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0-2	0-10	90-100	85-100	80-100	60-100	24-48	5-27
	5-24	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	24-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
HufAK:												
Huntington------	0-12	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	98-100	95-100	90-100	80-95	25-32	7-12
	12-42	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7	0	0	98-100	95-100	90-100	80-95	25-44	8-18
	42-80	Silty clay loam*, silt loam, loam, sandy loam.	CL*, ML, SC, SM	A-6*, A-7, A-4	0	0	98-100	95-100	65-100	35-90	20-44	3-20
HuhD2:												
Haggatt---------	0-5	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
Caneyville------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0-2	0-3	90-100	85-100	80-100	60-100	22-40	1-17
	6-10	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0-2	0-3	95-100	95-100	90-100	85-100	30-50	11-29
	10-36	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
HujD3:												
Haggatt---------	0-5	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	90-100	85-100	80-100	60-100	24-48	5-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
HujD3:												
Caneyville------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0-2	0-10	90-100	85-100	80-100	60-100	24-48	5-27
	5-24	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	24-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
JaeB2:												
Jennings--------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	85-95	22-40	3-15
	9-27	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-95	25-50	5-28
	27-38	Silt loam*, loam, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	80-95	60-85	25-40	5-20
	38-73	Clay loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	90-100	85-98	75-95	60-85	30-50	12-30
	73-77	Very parachannery silty clay*, extremely parachannery silty clay loam, silty clay, silty clay loam.	CL*	A-7-6*, A-6	0	0	100	98-100	95-100	85-100	38-50	16-22
	77-87	Bedrock*	---	---	---	---	---	---	---	---	---	---
JafC2:												
Jennings--------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	85-95	22-40	3-15
	9-27	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-95	25-50	5-28
	27-38	Silt loam*, loam, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	80-95	60-85	25-40	5-20
	38-73	Clay loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	90-100	85-98	75-95	60-85	30-50	12-30
	73-77	Very parachannery silty clay*, extremely parachannery silty clay loam, silty clay, silty clay loam.	CL*	A-7-6*, A-6	0	0	100	98-100	95-100	85-100	38-50	16-22
	77-87	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
JafC2:												
Blocher, hard bedrock substratum-----	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	22-40	3-15
	9-28	Silty clay loam*, silt loam, loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	80-100	65-95	24-48	5-25
	28-58	Clay*, clay loam	CL*, CH	A-7-6*, A-6	0	0	90-100	85-95	75-95	60-75	30-53	11-33
	58-75	Clay loam*, clay, silty clay.	CL*, CH	A-6*, A-7	0	0-1	90-100	85-95	75-95	60-85	25-51	11-30
	75-85	Bedrock*	---	---	---	---	---	---	---	---	---	---
JafC3:												
Jennings--------	0-3	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	85-95	25-40	5-15
	3-17	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	85-95	25-50	5-28
	17-30	Silt loam*, loam, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	95-100	80-95	60-85	25-40	5-20
	30-69	Clay loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	90-100	85-98	75-95	60-85	30-50	12-30
	69-75	Very parachannery silty clay*, extremely parachannery silty clay loam, silty clay, silty clay loam.	CL*	A-7-6*, A-6	0	0	100	98-100	95-100	85-100	38-50	16-22
	75-85	Bedrock*	---	---	---	---	---	---	---	---	---	---
Blocher, hard bedrock substratum-----	0-3	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-95	23-40	4-15
	3-10	Silty clay loam*, silt loam, loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	80-100	65-95	24-48	5-25
	10-43	Clay*, clay loam	CL*, CH	A-7-6*, A-6	0	0	90-100	85-95	75-95	60-75	30-53	11-33
	43-70	Clay loam*, clay, silty clay.	CL*, CH	A-6*, A-7	0	0-1	90-100	85-95	75-95	60-85	25-51	11-30
	70-80	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
KxkC2:												
Knobcreek-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	90-100	85-100	22-40	1-17
	7-18	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	23-50	3-29
	18-63	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	63-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45
Navilleton------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	8-35	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	23-50	3-29
	35-43	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	43-72	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	72-82	Bedrock*	---	---	---	---	---	---	---	---	---	---
KxlC3:												
Knobcreek-------	0-6	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	80-100	80-100	80-100	75-100	24-48	5-27
	6-13	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	24-50	5-29
	13-60	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	60-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45
Haggatt---------	0-5	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	90-100	85-100	80-100	60-100	24-48	5-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
KxlC3:												
Caneyville------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0-2	0-10	90-100	85-100	80-100	60-100	24-48	5-27
	5-24	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	24-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
KxlE3:												
Knobcreek-------	0-6	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	80-100	80-100	80-100	75-100	24-48	5-27
	6-13	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	24-50	5-29
	13-60	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	60-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45
Haggatt---------	0-5	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6, A-7-6	0	0	90-100	85-100	80-100	60-100	24-48	5-27
	5-11	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	11-42	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	42-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
Caneyville------	0-5	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0-2	0-10	90-100	85-100	80-100	60-100	24-48	5-27
	5-24	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	24-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
KxmE2:												
Knobcreek-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	90-100	85-100	22-40	1-17
	7-18	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	23-50	3-29
	18-63	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	63-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45
Haggatt---------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
Caneyville------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0-2	0-3	90-100	85-100	80-100	60-100	22-40	1-17
	6-10	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0-2	0-3	95-100	95-100	90-100	85-100	30-50	11-29
	10-36	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
KxoC2:												
Knobcreek-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	90-100	85-100	22-40	1-17
	7-18	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	23-50	3-29
	18-63	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	63-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
KxoC2:												
Navilleton------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	8-35	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	85-100	23-50	3-29
	35-43	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	43-72	Clay*, silty clay	CH*, CL	A-7-6*	0-5	0-5	80-100	80-100	80-100	75-100	44-75	20-46
	72-82	Bedrock*	---	---	---	---	---	---	---	---	---	---
Haggatt---------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
KxpD2:												
Knobcreek-------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	90-100	90-100	85-100	22-40	1-17
	7-18	Silty clay loam*, silt loam.	CL*, CL-ML, ML	A-6*, A-4, A-7-6	0	0	80-100	80-100	80-100	70-100	23-50	3-29
	18-63	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-46
	63-80	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-15	0-15	75-100	70-100	70-100	65-100	44-75	20-45
Haggatt---------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	90-100	85-100	80-100	75-100	22-40	1-17
	5-16	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	80-100	75-100	70-100	60-100	24-50	4-30
	16-44	Clay*, silty clay, gravelly clay, gravelly silty clay.	CH*, CL	A-7-6*	0-8	0-8	75-100	75-100	65-95	60-95	44-75	20-46
	44-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
KxpD2:												
Caneyville------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0-2	0-3	90-100	85-100	80-100	60-100	22-40	1-17
	6-10	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0-2	0-3	95-100	95-100	90-100	85-100	30-50	11-29
	10-36	Clay*, silty clay	CH*, CL	A-7*	0-2	0-15	90-100	85-100	85-100	80-100	44-75	20-45
	36-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
LpoAK:												
Lindside--------	0-10	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-95	25-38	7-18
	10-42	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	95-100	85-97	25-44	7-24
	42-80	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	95-100	85-97	25-44	7-24
McgC2:												
Markland--------	0-6	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	6-25	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	25-42	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	42-80	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	15-55	4-30
McnGQ:												
Markland--------	0-4	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	4-28	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	28-59	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	59-80	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	15-55	4-30
McpC3:												
Markland--------	0-4	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	95-100	90-100	35-48	15-28
	4-25	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	25-42	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	42-80	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	15-55	4-30

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
McuDQ:												
Markland--------	0-4	Silty clay loam*	CL*	A-7-6*, A-6	0	0	100	100	95-100	90-100	35-48	15-28
	4-18	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	18-40	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	40-80	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	15-55	4-30
MdqDQ:												
Markland--------	0-6	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	6-25	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	25-42	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-62	20-36
	42-80	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	15-55	4-30
MhuA:												
McGary----------	0-11	Silt loam*	CL*, CL-ML	A-6*, A-4	0	0	100	100	95-100	90-100	25-40	5-20
	11-42	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-60	20-34
	42-50	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-60	20-34
	50-60	Stratified silty clay loam to silty clay to silt loam*.	CL*, CH	A-7-6*, A-6	0	0	100	100	95-100	90-100	38-60	15-34
MhyA:												
Medora----------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	3-15
	9-28	Silt loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-100	32-50	12-30
	28-48	Loam*, silt loam, gravelly loam, clay loam.	CL*, CL-ML, SC, SC-SM	A-6*, A-4	0-2	0-5	80-100	75-100	65-95	45-75	18-40	4-20
	48-80	Sandy clay*, clay loam, sandy clay loam, gravelly sandy clay loam.	SC*, CL	A-6*, A-2-6, A-2-7, A-7-6	0-2	0-5	80-100	75-100	60-95	25-75	30-50	11-24

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
MhyB2:												
Medora----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	8-21	Silt loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-100	32-50	12-30
	21-45	Loam*, silt loam, gravelly loam, clay loam.	CL*, SC, SC-SM, CL-ML	A-6*, A-4	0-2	0-5	80-100	75-100	65-95	45-75	18-40	4-20
	45-80	Sandy clay*, clay loam, sandy clay loam, gravelly sandy clay loam.	SC*, CL	A-6*, A-2-6, A-2-7, A-7-6	0-2	0-5	80-100	75-100	60-95	25-75	30-50	11-24
MhyC2:												
Medora----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	8-21	Silt loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-100	32-50	12-30
	21-45	Loam*, silt loam, gravelly loam, clay loam.	CL*, SC, SC-SM, CL-ML	A-6*, A-4	0-2	0-5	80-100	75-100	65-95	45-75	18-40	4-20
	45-80	Sandy clay*, clay loam, sandy clay loam, gravelly sandy clay loam.	SC*, CL	A-6*, A-2-6, A-2-7, A-7-6	0-2	0-5	80-100	75-100	60-95	25-75	30-50	11-24
MhyC3:												
Medora----------	0-7	Silt loam*	CL*, CL-ML, ML	A-4*, A-6	0	0	100	100	95-100	85-100	23-40	3-15
	7-16	Silt loam*, silty clay loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-100	32-50	12-30
	16-35	Loam*, silt loam, gravelly loam, clay loam.	CL*, SC, SC-SM, CL-ML	A-6*, A-4	0-2	0-5	80-100	75-100	65-95	45-75	18-40	4-20
	35-80	Sandy clay*, clay loam, sandy clay loam, gravelly sandy clay loam.	SC*, CL	A-6*, A-2-6, A-2-7, A-7-6	0-2	0-5	80-100	75-100	60-95	25-75	30-50	11-24

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
MsvA:												
Montgomery------	0-15	Silty clay loam*, silty clay.	CL*	A-7-6*, A-6	0	0	100	100	100	85-100	40-50	20-30
	15-24	Silty clay*	CH*	A-7-6*	0	0	100	100	95-100	90-100	50-65	30-42
	24-48	Silty clay loam*, silty clay.	CL*, CH	A-7-6*	0	0	100	100	90-100	85-100	48-65	25-42
	48-60	Silty clay loam*, silty clay.	CL*, CH	A-7-6*, A-6	0	0	100	100	90-100	85-100	30-55	10-32
NaaA:												
Nabb------------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	22-40	2-15
	10-18	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	22-40	2-15
	18-35	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-90	25-45	5-25
	35-76	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	98-100	95-100	90-95	70-85	25-45	5-20
	76-80	Clay loam*, loam	CL*	A-6*, A-4, A-7-6	0-2	0-2	90-100	85-95	70-90	55-70	25-50	8-30
NaaB2:												
Nabb------------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	22-40	2-15
	7-13	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-95	22-40	2-15
	13-33	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-90	25-45	5-25
	33-71	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	98-100	95-100	90-95	70-85	25-45	5-20
	71-80	Clay loam*, loam	CL*	A-6*, A-4, A-7-6	0-2	0-2	90-100	85-95	70-90	55-70	25-50	8-30
NbhAK:												
Newark----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	20-40	4-16
	7-66	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	80-100	22-50	4-25
	66-80	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	22-50	4-25

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
OfbAW:												
Oldenburg-------	0-9	Loam*, silt loam	ML*, CL-ML	A-4*	0	0	98-100	95-100	80-95	55-80	18-32	2-8
	9-25	Loam*, fine sandy loam, sandy loam, silt loam.	ML*, CL-ML, SC-SM, SM	A-4*, A-2-4	0	0	95-100	85-100	50-90	25-70	15-32	2-8
	25-60	Stratified sandy loam to fine sandy loam to loam to loamy sand*, stratified gravelly sandy loam to gravelly loam to gravelly loamy sand.	SM*, CL-ML, ML, SC-SM	A-2-4*, A-1-b, A-4	0	0-8	60-100	50-100	30-90	15-65	0-24	NP-7
PcrB2:												
Pekin-----------	0-10	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-100	15-30	3-12
	10-24	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	75-100	24-38	5-18
	24-45	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	65-95	25-40	6-20
	45-80	Silt loam*, silty clay loam, loam, sandy loam.	CL*, ML, SC, SM	A-4*, A-2-4, A-2-6, A-6	0	0	90-100	85-100	50-100	25-95	15-38	3-18
PcrC2:												
Pekin-----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-100	15-30	3-12
	8-28	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	75-100	24-38	5-18
	28-57	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	65-95	25-40	6-20
	57-80	Silt loam*, silty clay loam, loam, sandy loam.	CL*, ML, SC, SM	A-4*, A-2-4, A-2-6, A-6	0	0	90-100	85-100	50-100	25-95	15-38	3-18

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
PcrC3:												
Pekin-----------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	75-100	15-30	3-12
	6-18	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	100	100	90-100	75-100	24-38	5-18
	18-42	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-4	0	0	95-100	90-100	80-100	65-95	25-40	6-20
	42-80	Silt loam*, silty clay loam, loam, sandy loam.	CL*, ML, SC, SM	A-4*, A-2-4, A-2-6, A-6	0	0	90-100	85-100	50-100	25-95	15-38	3-18
PhaA:												
Peoga-----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	70-98	22-38	3-18
	8-19	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	70-98	22-38	3-18
	19-36	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-98	24-42	7-22
	36-76	Silt loam*, silty clay loam, loam.	CL*	A-6*, A-4, A-7-6	0	0	98-100	95-100	80-100	55-95	24-42	7-22
	76-80	Silty clay loam*, silt loam, loam, clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	98-100	95-100	80-100	55-95	22-42	5-22
Pml. Pits, quarry												
Ppu. Pits, sand and gravel												
RblD3:												
Rarden----------	0-4	Silty clay loam*	CL*	A-6*, A-7	0	0	100	95-100	95-100	85-100	30-50	12-30
	4-24	Silty clay*, clay, silty clay loam.	CH*, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-100	41-70	13-45
	24-32	Extremely parachannery silty clay*, parachannery silty clay, extremely parachannery silty clay loam, parachannery silty clay loam.	CH*, CL, ML	A-7*	0-2	0-5	95-100	90-100	85-100	85-95	41-65	13-36
	32-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RbmD5:												
Rarden----------	0-20	Silty clay*	CH*, CL	A-7*	0-2	0-5	90-100	90-100	85-100	75-95	41-70	13-45
	20-26	Extremely parachannery silty clay*, parachannery silty clay, extremely parachannery silty clay loam, parachannery silty clay loam.	CH*, CL, ML	A-7*	0-2	0-5	90-100	90-100	85-100	85-95	41-65	13-36
	26-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
RptG:												
Rohan-----------	0-4	Channery silt loam*.	CL*, GC, ML	A-4*, A-6	0	0-10	55-80	50-75	45-70	35-65	25-40	3-15
	4-16	Very channery silt loam*, very channery silty clay loam, extremely channery silt loam.	GC*, GC-GM, GM	A-6*, A-1-b, A-2, A-7	0-15	0-15	25-60	25-55	20-55	20-50	25-45	3-20
	16-40	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RptG:												
Jessietown------	0-5	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	95-100	95-100	90-100	85-95	22-35	5-10
	5-23	Parachannery silty clay loam*, very parachannery silty clay loam, very parachannery silt loam, silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-2	80-100	80-100	75-100	65-95	25-45	5-20
	23-30	Extremely parachannery silty clay*, very parachannery silty clay loam, extremely parachannery silty clay loam, very parachannery silty clay.	CL*, CL-ML	A-6*, A-4, A-7-6	0-5	0-15	80-100	80-100	75-100	65-95	25-50	5-30
	30-40	Bedrock*	---	---	---	---	---	---	---	---	---	---
RtcA:												
Ryker-----------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	1-17
	9-12	Silt loam*	CL*, ML, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	12-38	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	38-67	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	67-80	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RtcB2:												
Ryker-----------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	1-17
	6-10	Silt loam*	CL*, ML, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	10-34	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	34-63	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	63-80	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
RzrB2:												
Ryker-----------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	1-17
	6-10	Silt loam*	CL*, ML, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	22-40	1-17
	10-34	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	34-63	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	63-80	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
RztC2:												
Ryker-----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	1-17
	8-32	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	32-58	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	58-80	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
Grayford--------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	93-100	90-100	80-100	65-100	22-40	NP-17
	8-18	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	18-43	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	43-50	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	50-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RztC3:												
Ryker-----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	24-40	4-17
	7-25	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	25-54	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	54-80	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
Grayford--------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	24-40	4-17
	7-12	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	12-42	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	42-52	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	52-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
RzvC2:												
Ryker-----------	0-8	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	90-100	80-100	22-40	1-17
	8-32	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	32-58	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-7, A-4	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	58-78	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
	78-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
Grayford--------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	93-100	90-100	80-100	65-100	22-40	NP-17
	8-18	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	18-43	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	43-50	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	50-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
RzvC3:												
Ryker-----------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	90-100	80-100	24-40	4-17
	7-25	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	90-100	75-100	25-48	4-28
	25-54	Silty clay loam*, clay loam, loam.	CL*	A-6*, A-4, A-7	0	0	85-100	80-100	70-95	55-90	24-48	8-27
	54-78	Silty clay*, clay	CH*, CL	A-7-6*	0-2	0-5	80-100	80-100	75-100	70-95	44-75	19-48
	78-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
Grayford--------	0-7	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	90-100	90-100	80-100	65-95	24-40	4-17
	7-12	Silt loam*, silty clay loam.	CL*	A-6*, A-4, A-7-6	0	0	90-100	90-100	80-100	65-95	24-50	8-29
	12-42	Clay loam*, loam, silt loam.	CL*	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	70-95	50-85	24-50	8-28
	42-52	Clay*, gravelly clay, cobbly clay, silty clay.	CH*, CL	A-7-6*	0	0-40	60-98	60-95	55-95	55-90	44-75	17-48
	52-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
SceB2:												
Scottsburg------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	98-100	98-100	90-95	85-95	22-40	2-15
	8-31	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	98-100	98-100	90-95	80-95	30-50	10-28
	31-53	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	95-100	90-95	85-90	75-85	30-50	12-28
	53-61	Parachannery silty clay*, parachannery silty clay loam.	CL*, CH, MH, ML	A-7*	0	0	98-100	95-100	95-100	85-95	40-52	16-22
	61-67	Weathered bedrock*.	---	---	---	---	---	---	---	---	---	---
	67-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
SfyB:												
Shircliff-------	0-8	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	85-100	25-40	5-20
	8-19	Silty clay loam*, silt loam.	CL*	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	26-50	8-30
	19-43	Silty clay*, silty clay loam.	CH*, CL	A-7-6*	0	0	100	100	95-100	90-100	45-65	20-40
	43-80	Silty clay*, silty clay loam, silt loam.	CL*, CH, CL-ML	A-7-6*, A-4, A-6	0	0	100	100	95-100	90-100	16-55	5-30

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
SoaB:												
Spickert--------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	90-100	23-40	3-15
	7-31	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	25-50	5-30
	31-58	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6	0	0-2	90-100	80-98	75-98	65-95	20-36	5-15
	58-64	Channery silt loam*, very channery silt loam, silty clay loam, silt loam.	CL*, CL-ML, GC, GC-GM	A-6*, A-2-4, A-2-6, A-4	0-5	5-40	40-90	35-85	35-85	25-80	20-40	5-20
	64-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
SodB:												
Spickert--------	0-10	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	90-100	23-40	3-15
	10-34	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	25-50	5-30
	34-65	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6	0	0-2	90-100	80-98	75-98	65-95	20-36	5-15
	65-72	Channery silt loam*, very channery silt loam, silty clay loam, silt loam.	CL*, CL-ML, GC, GC-GM	A-6*, A-2-4, A-2-6, A-4	0-5	5-40	40-90	35-85	35-85	25-80	20-40	5-20
	72-82	Bedrock*	---	---	---	---	---	---	---	---	---	---
SolC2:												
Spickert--------	0-7	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	95-100	90-100	23-40	3-15
	7-31	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	25-50	5-30
	31-58	Silt loam*, silty clay loam.	CL*, CL-ML	A-4*, A-6	0	0-2	90-100	80-98	75-98	65-95	20-36	5-15
	58-64	Channery silt loam*, very channery silt loam, silty clay loam, silt loam.	CL*, CL-ML, GC, GC-GM	A-6*, A-2-4, A-2-6, A-4	0-5	5-40	40-90	35-85	35-85	25-80	20-40	5-20
	64-80	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
SolC2:												
Wrays-----------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	90-100	22-35	2-12
	7-30	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	90-100	30-50	12-30
	30-39	Silty clay loam*, channery silty clay loam, silt loam, channery silt loam.	CL*, GC	A-6*, A-4, A-7-6	0	0-10	65-100	60-95	55-95	45-90	30-44	8-20
	39-49	Extremely channery silt loam*, extremely channery silty clay loam, channery silt loam, channery silty clay loam.	GC*, CL, GM, ML	A-2-4*, A-2-6, A-4, A-6	0-10	10-40	35-85	30-80	25-80	15-75	18-38	3-14
	49-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
StaAQ:												
Steff-----------	0-11	Silt loam*	ML*, CL, CL-ML	A-4*, A-6	0	0	100	95-100	85-100	75-100	20-39	2-15
	11-41	Silt loam*, silty clay loam.	CL*, CL-ML, ML	A-6*, A-4	0	0	95-100	95-100	85-100	75-100	25-50	3-25
	41-60	Silt loam*, stratified silt loam to loam to sandy loam.	CL*, ML, SC-SM, SM	A-4*, A-6, A-2-4	0	0	85-100	75-100	60-100	25-95	15-38	2-15
StdAQ:												
Stendal---------	0-8	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	90-100	75-100	22-38	3-15
	8-40	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	80-100	25-50	5-24
	40-60	Silt loam*, stratified silt loam to silty clay loam to loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	95-100	90-100	75-100	55-95	25-50	5-24

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
StdAW:												
Stendal---------	0-8	Silt loam*	CL-ML*, ML, CL	A-4*, A-6	0	0	100	100	90-100	75-100	22-38	3-15
	8-40	Silt loam*, silty clay loam.	CL*, CL-ML	A-6*, A-7-6, A-4	0	0	100	100	90-100	80-100	25-50	5-24
	40-60	Silt loam*, stratified silt loam to silty clay loam to loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	95-100	90-100	75-100	55-95	25-50	5-24
ThaC2:												
Trappist--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-95	20-35	2-14
	7-24	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	24-31	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	31-41	Bedrock*	---	---	---	---	---	---	---	---	---	---
ThbC3:												
Trappist--------	0-6	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-95	32-48	12-24
	6-21	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	21-24	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	24-40	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ThbD5:												
Trappist--------	0-3	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	95-100	90-100	85-95	32-48	12-24
	3-20	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	20-30	Weathered bedrock*.	---	---	---	---	---	---	---	---	---	---
	30-40	Bedrock*	---	---	---	---	---	---	---	---	---	---
ThcD3:												
Trappist--------	0-4	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-95	32-48	12-24
	4-21	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	21-27	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	27-40	Bedrock*	---	---	---	---	---	---	---	---	---	---
Rohan-----------	0-3	Channery silty clay loam*.	CL*, GC, GC-GM, ML	A-4*, A-6	0-5	0-10	55-80	50-75	45-70	35-65	25-40	3-15
	3-12	Very channery silty clay loam*, very channery silt loam, extremely channery silt loam.	GC*, GC-GM, GM	A-6*, A-1-b, A-2, A-7	0-15	0-15	25-60	25-55	20-55	20-50	25-45	3-20
	12-40	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ThdD:												
Trappist--------	0-6	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-95	20-35	2-14
	6-30	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	30-35	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	35-45	Bedrock*	---	---	---	---	---	---	---	---	---	---
Rohan-----------	0-3	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	80-100	80-95	65-95	60-90	25-35	3-14
	3-16	Very channery silt loam*, very channery silty clay loam, extremely channery silt loam.	GC*, GC-GM, GM	A-6*, A-1-b, A-2, A-7	0-15	0-15	25-60	25-55	20-55	20-50	25-45	3-20
	16-40	Bedrock*	---	---	---	---	---	---	---	---	---	---
TsaC3:												
Trappist--------	0-6	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	100	95-100	85-95	32-48	12-24
	6-21	Silty clay*, silty clay loam, parachannery silty clay, parachannery silty clay loam.	CL*, CH	A-7*, A-6	0	0	95-100	95-100	90-100	85-95	35-52	12-24
	21-24	Very parachannery silty clay loam*, extremely parachannery silty clay loam, parachannery silty clay.	CL*, CH	A-6*, A-7	0	0	95-100	90-100	85-100	80-95	35-52	12-22
	24-40	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
TsaC3:												
Deputy----------	0-2	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	100	95-100	90-100	23-40	4-15
	2-20	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	100	95-100	90-100	25-50	5-25
	20-43	Silty clay*, clay	CL*, CH	A-7-6*	0	0	90-100	85-100	80-100	75-95	40-60	15-30
	43-60	Weathered bedrock*.	---	---	---	---	---	---	---	---	---	---
	60-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
Uaa.												
Udorthents, cut and filled												
UaoAK:												
Udifluvents, cut and filled.												
Urban land.												
UedA:												
Urban land.												
Aquents, clayey substratum.												
UndAY:												
Urban land.												
Udifluvents.												
UngB:												
Urban land.												
Udarents, fragipan substratum.												
UnkB:												
Urban land.												
Udarents, silty substratum.												

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
UnpA:												
Urban land.												
Udarents, loamy substratum.												
UnsB:												
Urban land.												
Udarents, clayey substratum.												
W.												
Water												
WaaAV:												
Wakeland--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	16-28	3-9
	7-29	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	16-28	3-9
	29-60	Silt loam*, stratified silt loam to loam.	CL-ML*, CL, ML	A-4*	0	0	100	100	85-100	60-100	16-28	3-9
WaaAW:												
Wakeland--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	16-28	3-9
	7-29	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	90-100	80-100	16-28	3-9
	29-60	Silt loam*, stratified silt loam to loam.	CL-ML*, CL, ML	A-4*	0	0	100	100	85-100	60-100	16-28	3-9

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
WedB2:												
Weddel----------	0-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	95-100	90-100	80-95	23-40	3-15
	8-26	Silty clay loam*, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-50	6-30
	26-39	Silt loam*, silty clay loam, clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0	90-100	85-95	75-95	60-90	25-45	5-25
	39-66	Silty clay loam*, clay, clay loam.	CL*, CH	A-7*	0	0	85-98	80-95	70-95	55-90	40-60	15-30
	66-75	Parachannery silty clay*, very parachannery silty clay, parachannery silty clay loam, very parachannery silty clay loam.	CH*, CL	A-7*	0	0-2	95-100	90-100	85-100	80-95	40-60	15-32
	75-80	Bedrock*	---	---	---	---	---	---	---	---	---	---
WhcD:												
Wellrock--------	0-4	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	90-100	25-35	3-12
	4-8	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	95-100	25-35	3-12
	8-28	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	100	100	95-100	95-100	30-50	10-30
	28-36	Silty clay loam*, parachannery silty clay loam, parachannery silt loam, silt loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-5	90-100	85-100	80-100	75-100	20-42	5-18
	36-52	Extremely parachannery silt loam*, very parachannery silt loam, extremely parachannery silty clay loam, very parachannery silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7-6	0	0-5	85-100	80-100	80-100	75-100	20-42	5-18
	52-60	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
WhcD:												
Gnawbone--------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	95-100	90-100	90-100	80-95	16-25	2-8
	7-35	Parachannery silty clay loam*, parachannery silt loam, silty clay loam, silt loam.	CL*	A-6*, A-4, A-7	0	0-3	85-100	80-100	80-100	70-95	30-44	8-20
	35-39	Extremely parachannery silt loam*, very parachannery silt loam, very parachannery silty clay loam, extremely parachannery silty clay loam.	CL*, CL-ML	A-6*, A-4, A-7	0	0-5	85-100	80-100	80-100	70-95	20-42	7-18
	39-60	Bedrock*	---	---	---	---	---	---	---	---	---	---
WnmA:												
Whitcomb--------	0-9	Silt loam*	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	95-100	85-95	23-40	3-15
	9-15	Silt loam*	CL*, CL-ML	A-4*, A-6	0	0	100	95-100	95-100	85-95	25-40	4-15
	15-30	Silty clay loam*, silt loam.	CL*	A-6*, A-7-6	0	0	100	95-100	95-100	90-95	30-50	10-28
	30-48	Silty clay loam*	CL*	A-6*, A-7-6	0	0	100	95-100	95-100	85-95	28-50	15-28
	48-56	Silty clay* silty clay loam.	ML*, CL, MH, CH	A-7*	0	0	95-100	90-100	90-100	80-95	40-52	15-21
	56-61	Very parachannery silty clay loam*, parachannery silty clay loam, extremely parachannery silty clay, parachannery silty clay.	ML*, CL, MH, CH	A-7*	0	0	100	100	95-100	85-95	40-52	15-21
	61-80	Bedrock*	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
WokAV:												
Wilbur----------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	95-100	70-100	20-30	3-10
	7-32	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	95-100	80-100	20-30	3-10
	32-60	Silt loam*, stratified silt loam to loam.	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	80-100	60-100	20-35	3-15
WokAW:												
Wilbur----------	0-7	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	95-100	70-100	20-30	3-10
	7-32	Silt loam*	CL-ML*, CL, ML	A-4*	0	0	100	100	95-100	80-100	20-30	3-10
	32-60	Silt loam*, stratified silt loam to loam.	CL-ML*, CL, ML	A-4*, A-6	0	0	100	100	80-100	60-100	20-35	3-15
WprAW:												
Wirt------------	0-8	Loam*, silt loam	CL-ML*, CL, ML	A-4*	0	0	98-100	95-100	80-100	60-90	18-30	3-10
	8-38	Loam*, sandy loam, silt loam.	CL-ML*, CL, ML, SC, SM	A-4*, A-2-4	0	0	95-100	80-100	50-100	25-85	15-30	2-10
	38-60	Stratified loam to gravelly sandy loam to loamy sand*.	SM*, CL-ML, ML, SC-SM	A-2-4*, A-1-b, A-4	0	0-2	80-100	50-100	30-95	15-75	0-24	NP-7

Table 17.--Physical Properties of the Soils

(Absence of an entry indicates that data were not estimated. The properties are displayed as low, representative, and high values separated by hyphens)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
AddA:									
Avonburg----------------	0-11	15-18-25	62-67-75	10-15-18	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.6-2.0
	11-21	15-18-20	60-66-73	12-16-20	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	21-37	8-11-20	50-62-71	24-27-30	1.40-1.50-1.60	0.06-0.33-0.60	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	37-52	14-20-25	52-56-73	22-24-28	1.60-1.65-1.70	0.01-0.18-0.20	0.09-0.10-0.11	0.00-1.50-2.90	0.0-0.2-0.5
	52-83	20-24-30	50-54-65	20-22-26	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	83-90	25-30-35	30-36-40	27-34-40	1.50-1.60-1.70	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
AddB2:									
Avonburg----------------	0-7	15-18-25	62-67-75	10-15-18	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.4-2.0
	7-16	15-18-20	60-66-73	12-16-20	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	16-32	8-11-20	50-62-71	24-27-30	1.40-1.50-1.60	0.06-0.33-0.60	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	32-42	14-20-25	52-56-73	22-24-28	1.60-1.65-1.70	0.01-0.18-0.20	0.09-0.10-0.11	0.00-1.50-2.90	0.0-0.2-0.5
	42-63	20-24-30	50-54-65	20-22-26	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	63-80	25-30-35	30-36-40	27-34-40	1.50-1.60-1.70	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
BbhA:									
Bartle------------------	0-8	5-12-20	62-74-85	10-14-18	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.6-2.0
	8-17	5-12-15	65-72-83	12-16-20	1.40-1.50-1.60	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.2-0.5
	17-30	5-10-15	53-63-77	18-27-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	0.00-1.50-2.90	0.0-0.2-0.5
	30-50	5-10-15	53-65-77	18-25-32	1.60-1.70-1.80	0.01-0.18-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	50-80	5-22-40	40-53-65	18-25-32	1.50-1.60-1.70	0.06-0.33-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
BcrAQ:									
Beanblossom-------------	0-5	10-18-35	45-65-70	12-17-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-24	10-19-50	40-65-75	10-16-22	1.40-1.45-1.50	2.00-4.00-6.00	0.09-0.18-0.21	0.00-1.50-2.90	1.0-1.5-2.0
	24-54	15-40-50	30-43-65	10-17-24	1.40-1.45-1.50	2.00-11.00-20.00	0.04-0.09-0.14	0.00-1.50-2.90	0.5-0.8-1.0
	54-60	---	---	---	---	0.00-0.01-0.06	---	---	---
BcrAW:									
Beanblossom-------------	0-5	10-18-35	45-65-70	12-17-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-24	10-19-50	40-65-75	10-16-22	1.40-1.45-1.50	2.00-4.00-6.00	0.09-0.18-0.21	0.00-1.50-2.90	1.0-1.5-2.0
	24-54	15-40-50	30-43-65	10-17-24	1.40-1.45-1.50	2.00-11.00-20.00	0.04-0.09-0.14	0.00-1.50-2.90	0.5-0.8-1.0
	54-60	---	---	---	---	0.00-0.01-0.06	---	---	---
BdoA:									
Bedford-----------------	0-9	2-6 -12	62-75-80	14-19-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-24	2-4 -6	62-68-76	22-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	24-51	4-4 -12	56-69-73	22-27-32	1.55-1.68-1.80	0.01-0.06-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	51-80	3-8 -10	20-32-52	45-60-75	1.40-1.50-1.60	0.20-0.60-2.00	0.06-0.07-0.08	6.00-7.50-8.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
BdoB:									
Bedford-----------------	0-9	2-6 -12	62-75-80	14-19-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-24	2-4 -6	62-68-76	22-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	24-51	4-4 -12	56-69-73	22-27-32	1.55-1.68-1.80	0.01-0.06-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	51-80	3-8 -10	20-32-52	45-60-75	1.40-1.50-1.60	0.20-0.60-2.00	0.06-0.07-0.08	6.00-7.50-8.90	0.0-0.2-0.5
BfbC2:									
Blocher, soft bedrock substratum------------	0-8	10-15-20	54-64-70	14-21-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	8-20	10-24-27	45-51-60	20-25-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	20-61	10-30-38	20-25-50	35-45-55	1.50-1.55-1.60	0.06-0.13-0.20	0.10-0.13-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	61-80	---	---	---	---	0.00-0.01-0.06	---	---	---
Weddel------------------	0-8	6-12-20	60-67-80	12-21-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	8-30	6-8 -15	50-65-70	24-27-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.3-0.5
	30-50	15-19-25	40-56-65	22-25-30	1.60-1.65-1.70	0.01-0.18-0.20	0.08-0.09-0.10	0.00-1.50-2.90	0.0-0.2-0.5
	50-62	15-17-25	30-44-50	34-39-45	1.50-1.60-1.70	0.06-0.18-0.20	0.08-0.09-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	62-67	1-3 -5	40-55-60	35-42-50	1.40-1.50-1.60	0.01-0.04-0.06	0.05-0.08-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	67-80	---	---	---	---	0.00-0.01-0.06	---	---	---
BfcC3:									
Blocher, soft bedrock substratum------------	0-6	10-15-20	45-55-65	27-30-34	1.30-1.45-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.5-1.2-2.0
	6-11	20-25-38	35-43-50	27-32-34	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	11-61	10-30-38	20-25-50	35-45-55	1.50-1.55-1.60	0.06-0.13-0.20	0.10-0.13-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	61-80	---	---	---	---	0.00-0.01-0.06	---	---	---
Weddel------------------	0-6	6-12-20	50-64-75	18-24-26	1.40-1.50-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	6-17	6-8 -15	50-65-75	24-27-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.3-0.5
	17-38	15-19-25	40-56-65	22-25-30	1.60-1.65-1.70	0.01-0.18-0.20	0.08-0.09-0.10	0.00-1.50-2.90	0.0-0.2-0.5
	38-55	15-17-25	30-44-50	34-39-45	1.50-1.60-1.70	0.06-0.18-0.20	0.08-0.09-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	55-61	1-3 -5	40-55-60	35-42-50	1.40-1.50-1.60	0.01-0.04-0.06	0.05-0.08-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	61-80	---	---	---	---	0.00-0.01-0.06	---	---	---
BnyD3:									
Bonnell-----------------	0-3	20-23-35	31-47-50	27-30-34	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.15-0.18	3.00-4.50-5.90	0.5-1.2-2.0
	3-32	20-25-35	25-34-45	35-41-48	1.50-1.60-1.70	0.20-0.50-2.00	0.11-0.13-0.15	6.00-7.50-8.90	0.0-0.5-1.0
	32-54	20-31-45	25-39-45	24-30-34	1.50-1.55-1.60	0.20-0.40-0.60	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	54-80	25-40-50	24-35-40	18-25-34	1.60-1.70-1.80	0.06-0.33-0.60	0.04-0.08-0.12	3.00-4.50-5.90	0.0-0.2-0.5
BobE5:									
Bonnell-----------------	0-3	20-23-35	31-47-50	27-30-34	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.15-0.18	3.00-4.50-5.90	0.1-0.8-1.0
	3-25	20-25-35	25-34-45	35-41-48	1.50-1.60-1.70	0.20-0.50-2.00	0.11-0.13-0.15	6.00-7.50-8.90	0.0-0.5-1.0
	25-38	20-31-45	25-39-45	24-30-34	1.50-1.55-1.60	0.20-0.40-0.60	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	38-60	25-40-50	24-35-40	18-25-34	1.60-1.70-1.80	0.06-0.33-0.60	0.04-0.08-0.12	3.00-4.50-5.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
BobE5:									
Hickory-----------------	0-3	20-30-40	26-39-50	27-31-34	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.15-0.18	3.00-4.50-5.90	0.1-0.8-1.0
	3-35	20-30-40	25-39-50	24-31-35	1.45-1.55-1.65	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	35-40	25-40-50	25-36-45	15-24-32	1.50-1.60-1.70	0.60-1.30-2.00	0.11-0.15-0.19	0.00-1.50-2.90	0.0-0.2-0.5
	40-60	30-40-50	25-40-49	15-20-30	1.50-1.63-1.75	0.60-1.30-2.00	0.10-0.13-0.15	0.00-1.50-2.90	0.0-0.2-0.5
BodAW:									
Bonnie------------------	0-8	5-10-15	60-70-80	18-20-26	1.30-1.40-1.50	0.60-1.30-2.00	0.22-0.24-0.25	0.00-1.50-2.90	1.0-1.8-3.0
	8-38	5-10-15	60-70-80	18-20-26	1.35-1.45-1.55	0.60-1.30-2.00	0.21-0.23-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	38-60	5-10-20	50-66-75	18-24-30	1.35-1.45-1.55	0.20-0.40-0.60	0.14-0.19-0.24	0.00-1.50-2.90	0.0-0.5-1.0
BvoG:									
Brownstown--------------	0-6	5-7 -30	55-81-89	6-12-18	1.30-1.35-1.40	0.06-1.03-2.00	0.15-0.20-0.24	0.00-1.50-2.90	1.0-2.5-4.0
	6-18	10-23-30	55-64-82	8-13-18	1.30-1.40-1.50	2.00-4.00-6.00	0.05-0.12-0.19	0.00-1.50-2.90	0.5-0.8-1.0
	18-36	10-22-30	55-65-82	8-13-18	1.30-1.40-1.50	2.00-4.00-6.00	0.03-0.07-0.10	0.00-1.50-2.90	0.0-0.2-0.5
	36-60	---	---	---	---	0.00-0.18-0.60	---	---	---
Gilwood-----------------	0-6	6-8 -15	65-77-84	10-15-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-11	6-8 -15	63-73-80	14-19-22	1.30-1.35-1.40	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-0.8-1.0
	11-22	6-11-15	59-66-76	18-23-26	1.30-1.40-1.50	0.60-1.30-2.00	0.12-0.16-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	22-32	6-17-20	56-65-82	12-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.06-0.11-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	32-60	---	---	---	---	0.00-0.18-0.60	---	---	---
CcaG:									
Caneyville--------------	0-8	5-12-18	57-70-80	12-18-25	1.20-1.38-1.55	0.60-1.30-2.00	0.17-0.21-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	8-14	5-10-15	50-59-70	24-31-38	1.40-1.50-1.70	0.60-1.30-2.00	0.13-0.17-0.21	3.00-4.50-5.90	0.0-1.0-1.5
	14-33	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	33-60	---	---	---	---	0.06-1.30-6.00	---	---	---
Rock outcrop.									
CkkB2:									
Cincinnati--------------	0-8	5-11-26	60-70-80	14-19-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-31	5-8 -28	50-66-70	22-26-30	1.45-1.55-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	31-72	14-26-40	40-51-60	20-23-26	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	72-80	12-26-40	30-42-49	25-32-39	1.55-1.65-1.75	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
CldC2:									
Cincinnati--------------	0-8	5-11-26	60-70-80	14-19-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-24	5-8 -28	50-66-70	22-26-30	1.45-1.55-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	24-74	14-26-40	40-51-60	20-23-26	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	74-80	12-26-40	30-42-49	25-32-39	1.55-1.65-1.75	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
CldC2:									
Blocher-----------------	0-7	5-15-25	51-67-80	12-18-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-17	5-10-25	45-62-75	20-28-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	0.00-1.50-2.90	0.5-0.8-1.0
	17-44	25-28-35	20-32-40	35-40-45	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	44-76	25-34-38	22-31-45	30-35-40	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	76-80	25-40-45	30-34-48	16-26-28	1.50-1.60-1.70	0.06-0.33-0.60	0.08-0.11-0.13	0.00-1.50-2.90	0.0-0.2-0.5
CldC3:									
Cincinnati--------------	0-5	3-8 -25	60-68-80	18-24-27	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	5-14	5-8 -25	50-66-70	22-26-30	1.45-1.55-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	14-35	20-25-30	40-52-60	20-23-30	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	35-78	20-26-35	30-42-49	25-32-39	1.55-1.65-1.75	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	78-84	25-40-45	30-35-48	20-25-34	1.55-1.65-1.75	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
Blocher-----------------	0-5	3-15-25	50-61-80	16-24-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	5-18	5-10-25	45-62-75	20-28-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	0.00-1.50-2.90	0.5-0.8-1.0
	18-47	25-28-35	20-32-40	35-40-45	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	47-64	25-34-38	22-31-45	30-35-40	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	64-80	25-40-45	30-34-48	16-26-28	1.50-1.60-1.70	0.06-0.33-0.60	0.08-0.11-0.13	0.00-1.50-2.90	0.0-0.2-0.5
ClfA:									
Cobbsfork---------------	0-12	12-17-24	61-70-78	10-13-15	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.6-3.0
	12-18	12-17-24	56-65-78	10-18-20	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	18-38	10-13-20	50-63-70	20-24-30	1.40-1.50-1.60	0.20-1.10-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	38-50	18-19-28	44-60-62	20-21-28	1.60-1.70-1.80	0.01-0.18-0.20	0.08-0.12-0.15	0.00-1.50-2.90	0.0-0.2-0.5
	50-85	18-22-28	46-56-62	20-22-26	1.60-1.70-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	85-90	25-28-35	27-39-48	27-33-38	1.50-1.60-1.70	0.01-0.06-0.06	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
ComC:									
Coolville---------------	0-8	1-3 -10	75-85-87	10-12-18	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.5-4.0
	8-21	1-3 -5	56-66-72	27-31-39	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	21-37	1-4 -12	40-54-64	35-42-58	1.40-1.53-1.65	0.06-0.13-0.20	0.10-0.13-0.15	3.00-4.50-5.90	0.0-0.2-0.5
	37-44	1-5 -10	40-62-69	30-33-58	1.40-1.53-1.65	0.01-0.10-0.20	0.08-0.10-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	44-60	---	---	---	---	0.00-0.01-0.06	---	---	---
ConC3:									
Coolville---------------	0-4	1-3 -10	65-74-82	17-23-26	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.20-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	4-17	1-3 -5	56-66-72	27-31-39	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	17-38	1-4 -12	40-54-64	35-42-58	1.40-1.53-1.65	0.06-0.13-0.20	0.10-0.13-0.15	3.00-4.50-5.90	0.0-0.2-0.5
	38-43	1-5 -10	40-62-69	30-33-58	1.40-1.53-1.65	0.01-0.10-0.20	0.08-0.10-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	43-60	---	---	---	---	0.00-0.01-0.06	---	---	---
Rarden------------------	0-6	1-5 -10	52-63-72	27-32-38	1.35-1.45-1.55	0.20-0.40-0.60	0.20-0.22-0.23	3.00-4.50-5.90	0.5-1.2-2.0
	6-28	1-4 -10	30-50-62	35-46-60	1.40-1.50-1.60	0.06-0.13-0.20	0.10-0.12-0.14	3.00-4.50-5.90	0.0-0.5-1.0
	28-37	1-4 -10	40-54-65	30-42-58	1.40-1.53-1.65	0.01-0.10-0.20	0.06-0.09-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	37-60	---	---	---	---	0.00-0.01-0.06	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
ConD:									
Coolville---------------	0-5	1-3 -10	75-85-86	10-12-18	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.5-4.0
	5-18	1-3 -5	56-66-72	27-31-39	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	18-39	1-4 -12	40-54-64	35-42-58	1.40-1.53-1.65	0.06-0.13-0.20	0.10-0.13-0.15	3.00-4.50-5.90	0.0-0.2-0.5
	39-45	1-5 -10	40-62-69	30-33-58	1.40-1.53-1.65	0.01-0.10-0.20	0.08-0.10-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	45-60	---	---	---	---	0.00-0.01-0.06	---	---	---
Rarden------------------	0-4	1-5 -10	52-65-72	27-30-38	1.35-1.45-1.55	0.20-0.40-0.60	0.20-0.22-0.23	3.00-4.50-5.90	1.0-2.5-4.0
	4-28	1-4 -10	35-50-62	35-46-60	1.40-1.50-1.60	0.06-0.13-0.20	0.10-0.12-0.14	3.00-4.50-5.90	0.0-0.5-1.0
	28-36	1-4 -10	40-54-65	30-42-58	1.40-1.53-1.65	0.01-0.10-0.20	0.06-0.09-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	36-60	---	---	---	---	0.00-0.01-0.06	---	---	---
CspA:									
Crider------------------	0-9	2-7 -12	64-75-86	12-18-24	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-43	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	43-80	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
CspB2:									
Crider------------------	0-7	2-7 -12	62-72-83	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-36	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	36-80	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
CtrB2:									
Crider------------------	0-7	2-7 -12	62-72-83	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-36	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	36-75	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	75-100	---	---	---	---	0.20-5.81-20.00	---	---	---
CtwB:									
Crider------------------	0-8	2-5 -12	64-76-80	15-19-24	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-34	2-5 -12	56-67-74	24-28-32	1.40-1.50-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	34-46	4-10-12	52-60-70	24-30-36	1.40-1.50-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.40-5.90	0.0-0.2-0.5
	46-80	2-7 -12	28-39-60	35-54-60	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.19	3.00-4.40-5.90	0.0-0.2-0.5
Bedford-----------------	0-9	2-6 -12	64-75-80	14-19-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-24	2-4 -6	62-68-76	22-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	24-51	4-4 -12	56-69-73	22-27-32	1.55-1.68-1.80	0.01-0.06-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	51-80	3-8 -10	20-32-52	45-60-75	1.40-1.50-1.60	0.20-0.60-2.00	0.06-0.07-0.08	6.00-7.50-8.90	0.0-0.2-0.5
Navilleton--------------	0-8	2-4 -12	64-77-80	15-19-24	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-35	2-3 -10	58-69-74	24-28-32	1.40-1.50-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	35-65	3-6 -18	20-34-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	65-79	3-4 -18	20-36-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	79-83	---	---	---	---	0.00-0.40-6.00	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
CwaAQ:									
Cuba--------------------	0-10	7-9 -12	64-73-81	12-18-24	1.30-1.43-1.55	0.60-1.30-2.00	0.22-0.23-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-47	7-9 -12	62-69-75	18-22-26	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.5-0.8-1.0
	47-60	10-31-67	25-52-75	8-17-26	1.35-1.48-1.60	0.60-3.30-6.00	0.10-0.16-0.22	0.00-1.50-2.90	0.0-0.2-0.5
CxgC3:									
Crider------------------	0-7	2-7 -12	62-71-80	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-30	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	30-80	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Haggatt-----------------	0-5	2-7 -12	54-65-78	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.06-1.30-6.00	---	---	---
CxhC2:									
Crider------------------	0-7	2-7 -12	62-72-83	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-36	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	36-80	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.06-1.30-6.00	---	---	---
CxmC2:									
Crider------------------	0-7	2-7 -12	62-72-83	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-43	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	43-75	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	75-80	---	---	---	---	0.20-5.81-20.00	---	---	---
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.20-5.81-20.00	---	---	---
CxnC3:									
Crider------------------	0-7	2-7 -12	62-71-80	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-30	2-5 -10	55-64-74	24-31-34	1.40-1.53-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	30-75	1-6 -10	24-29-50	40-65-75	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	75-80	---	---	---	---	0.20-5.81-20.00	---	---	---
Haggatt-----------------	0-5	2-7 -12	54-65-78	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.20-5.81-20.00	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
DbrG:									
Deam--------------------	0-3	2-4 -10	56-68-71	27-28-34	1.30-1.35-1.40	0.60-1.30-2.00	0.21-0.22-0.23	3.00-4.50-5.90	2.0-3.0-4.0
	3-24	0-1 -5	47-59-65	35-40-48	1.40-1.50-1.60	0.20-0.40-0.60	0.11-0.14-0.16	3.00-4.50-5.90	0.5-0.8-1.0
	24-36	1-2 -5	40-55-74	35-43-45	1.50-1.60-1.70	0.01-0.10-0.20	0.04-0.07-0.09	3.00-4.50-5.90	0.0-0.2-0.5
	36-60	---	---	---	---	0.00-0.01-0.06	---	---	---
DdsAW:									
Dearborn----------------	0-10	15-27-50	30-51-67	18-22-26	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.20-0.24	0.00-1.50-2.90	3.0-4.0-5.0
	10-16	25-35-78	10-40-49	15-25-30	1.40-1.50-1.60	0.60-1.30-2.00	0.08-0.15-0.18	0.00-1.90-2.90	0.5-1.8-3.0
	16-60	47-58-78	10-22-30	10-20-26	1.50-1.60-1.70	2.00-4.00-6.00	0.02-0.05-0.09	0.00-1.50-2.90	0.5-0.8-2.5
DfnA:									
Dubois------------------	0-10	8-13-20	60-72-80	10-15-20	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-17	8-11-18	60-72-80	15-17-20	1.35-1.48-1.60	0.60-1.30-2.00	0.20-0.24-0.27	0.00-1.50-2.90	0.0-0.5-1.0
	17-38	5-10-12	50-61-70	25-29-34	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	38-82	5-10-30	40-65-70	15-25-32	1.65-1.73-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	82-96	12-18-70	30-48-70	15-34-39	1.50-1.60-1.70	0.01-0.04-0.06	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
DtvC2:									
Deputy------------------	0-8	2-4 -10	64-76-86	12-20-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-27	2-6 -10	55-63-75	24-31-35	1.35-1.45-1.55	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	27-53	2-11-20	30-44-50	40-45-50	1.40-1.50-1.60	0.06-0.13-0.20	0.08-0.12-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	53-77	---	---	---	---	0.00-0.01-0.06	---	---	---
	77-87	---	---	---	---	0.00-0.18-0.60	---	---	---
Trappist----------------	0-7	1-7 -15	59-73-84	15-20-26	1.20-1.38-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-24	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	24-31	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	31-41	---	---	---	---	0.00-0.18-0.60	---	---	---
EbpD2:									
Eden--------------------	0-5	1-3 -10	46-58-64	35-39-50	1.30-1.45-1.60	0.60-1.30-2.00	0.12-0.21-0.23	3.00-4.50-5.90	1.0-2.0-4.0
	5-23	1-3 -10	30-45-55	40-52-60	1.40-1.50-1.60	0.06-0.13-0.20	0.08-0.11-0.13	6.00-7.50-8.90	0.5-0.8-1.0
	23-60	---	---	---	---	0.00-0.01-0.06	---	---	---
EesA:									
Elkinsville-------------	0-8	8-19-22	58-66-80	12-15-20	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-38	8-13-20	50-59-74	18-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.4-1.0
	38-75	25-40-55	15-39-49	20-21-30	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	75-80	35-44-69	15-36-49	16-20-28	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.16-0.19	3.00-4.50-5.90	0.0-0.2-0.5
Millstone---------------	0-12	8-19-22	58-66-80	12-15-20	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	12-59	35-40-65	7-41-47	18-19-28	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.17-0.19	0.00-1.50-2.90	0.0-0.2-0.8
	59-80	35-50-65	9-37-45	10-13-26	1.40-1.55-1.70	0.60-1.30-2.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
EesB:									
Elkinsville-------------	0-8	8-19-22	52-64-80	12-17-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	8-34	8-13-20	50-59-74	18-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.4-1.0
	34-60	25-40-55	15-39-49	20-21-30	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	60-80	35-44-69	15-36-49	16-20-28	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.16-0.19	3.00-4.50-5.90	0.0-0.2-0.5
Millstone---------------	0-10	8-19-22	56-64-80	12-17-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	10-62	35-40-65	7-41-47	18-19-28	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.17-0.19	0.00-1.50-2.90	0.0-0.2-0.8
	62-80	35-50-65	9-37-45	10-13-26	1.40-1.55-1.70	0.60-1.30-2.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5
EesC2:									
Elkinsville-------------	0-7	8-19-22	52-62-77	15-19-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	7-30	8-13-20	50-59-74	18-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.4-1.0
	30-56	25-40-55	15-39-49	20-21-30	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	56-80	35-44-69	15-36-49	16-20-28	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.16-0.19	3.00-4.50-5.90	0.0-0.2-0.5
Millstone---------------	0-7	8-19-22	52-62-80	12-19-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	7-58	35-40-65	7-41-47	18-19-28	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.17-0.19	0.00-1.50-2.90	0.0-0.2-0.8
	58-80	35-50-65	9-37-45	10-13-26	1.40-1.55-1.70	0.60-1.30-2.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5
EesD2:									
Elkinsville-------------	0-7	8-19-22	52-62-77	15-19-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	7-30	8-13-20	50-59-74	18-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.4-1.0
	30-56	25-40-55	15-39-49	20-21-30	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	56-80	35-44-69	15-36-49	16-20-28	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.16-0.19	3.00-4.50-5.90	0.0-0.2-0.5
Millstone---------------	0-7	8-19-22	52-62-80	12-19-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	7-58	35-40-65	7-41-47	18-19-28	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.17-0.19	0.00-1.50-2.90	0.0-0.2-0.8
	58-80	35-50-65	9-37-45	10-13-26	1.40-1.55-1.70	0.60-1.30-2.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5
EesFQ:									
Elkinsville-------------	0-5	8-19-22	52-66-80	12-15-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.2-4.0
	5-24	8-13-20	50-59-74	18-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.4-1.0
	24-50	25-40-55	15-39-49	20-21-30	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	50-80	35-44-69	15-36-49	16-20-28	1.40-1.50-1.60	0.60-1.30-2.00	0.12-0.16-0.19	3.00-4.50-5.90	0.0-0.2-0.5
Millstone---------------	0-6	8-19-22	52-66-80	12-15-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.2-4.0
	6-54	35-40-65	7-41-47	18-19-28	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.17-0.19	0.00-1.50-2.90	0.0-0.2-0.8
	54-80	35-50-65	9-37-45	10-13-26	1.40-1.55-1.70	0.60-1.30-2.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5
EsaG:									
Eden--------------------	0-6	1-3 -10	45-58-64	35-39-50	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.23	3.00-4.50-5.90	4.0-6.0-8.0
	6-11	1-3 -10	30-51-55	40-46-60	1.40-1.50-1.60	0.06-0.13-0.20	0.08-0.11-0.13	6.00-7.50-8.90	1.0-3.0-5.0
	11-39	1-3 -10	30-45-55	40-52-60	1.40-1.50-1.60	0.06-0.13-0.20	0.08-0.11-0.13	6.00-7.50-8.90	0.5-0.8-2.0
	39-60	---	---	---	---	0.00-0.01-0.06	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
GgbG:									
Gilwood-----------------	0-6	6-8 -15	65-77-84	10-15-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-11	6-8 -15	63-73-80	14-19-22	1.30-1.35-1.40	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-0.8-1.0
	11-22	6-11-15	59-66-76	18-23-26	1.30-1.40-1.50	0.60-1.30-2.00	0.12-0.16-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	22-32	6-17-20	56-65-82	12-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.06-0.11-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	32-60	---	---	---	---	0.00-0.18-0.60	---	---	---
Brownstown--------------	0-6	5-7 -30	55-81-89	6-12-18	1.30-1.35-1.40	0.06-1.03-2.00	0.15-0.20-0.24	0.00-1.50-2.90	1.0-2.5-4.0
	6-18	10-23-30	55-64-82	8-13-18	1.30-1.40-1.50	2.00-4.00-6.00	0.05-0.12-0.19	0.00-1.50-2.90	0.5-0.8-1.0
	18-36	10-22-30	55-65-82	8-13-18	1.30-1.40-1.50	2.00-4.00-6.00	0.03-0.07-0.10	0.00-1.50-2.90	0.0-0.2-0.5
	36-60	---	---	---	---	0.00-0.18-0.60	---	---	---
GgfD:									
Gilwood-----------------	0-6	6-8 -15	60-80-84	10-12-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-11	6-8 -15	60-73-80	14-19-22	1.30-1.35-1.40	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-0.8-1.0
	11-22	6-11-15	50-66-75	18-23-26	1.30-1.40-1.50	0.60-1.30-2.00	0.12-0.16-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	22-32	6-17-20	50-65-75	12-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.06-0.11-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	32-42	---	---	---	---	0.00-0.18-0.60	---	---	---
Wrays-------------------	0-6	2-3 -12	60-83-85	10-14-20	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-25	2-3 -12	55-67-75	22-30-34	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	25-34	6-12-15	50-57-70	24-31-34	1.40-1.50-1.60	0.60-1.30-2.00	0.13-0.17-0.20	3.00-4.50-5.90	0.0-0.5-1.0
	34-44	8-12-20	60-71-80	12-17-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.12-0.17	0.00-1.50-2.90	0.0-0.2-0.5
	44-54	---	---	---	---	0.00-0.18-0.60	---	---	---
GgfE2:									
Gilwood-----------------	0-6	6-8 -15	65-76-82	12-16-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-11	6-8 -15	63-73-80	14-19-22	1.30-1.35-1.40	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-0.8-1.0
	11-22	6-11-15	59-66-76	18-23-26	1.30-1.40-1.50	0.60-1.30-2.00	0.12-0.16-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	22-32	6-17-20	56-65-82	12-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.06-0.11-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	32-60	---	---	---	---	0.00-0.18-0.60	---	---	---
Wrays-------------------	0-6	2-4 -12	66-81-83	10-15-22	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-25	2-3 -12	55-67-75	22-30-34	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	25-34	6-12-15	51-57-70	24-31-34	1.40-1.50-1.60	0.60-1.30-2.00	0.13-0.17-0.20	3.00-4.50-5.90	0.0-0.5-1.0
	34-44	8-12-20	60-71-80	12-17-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.12-0.17	0.00-1.50-2.90	0.0-0.2-0.5
	44-60	---	---	---	---	0.00-0.18-0.60	---	---	---
GmaG:									
Gnawbone----------------	0-7	5-10-15	65-75-85	10-15-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	7-27	5-8 -15	51-63-71	24-29-34	1.40-1.50-1.60	0.60-1.30-2.00	0.11-0.16-0.20	0.00-1.50-2.90	0.0-0.5-1.0
	27-39	5-7 -15	53-70-75	15-23-32	1.40-1.50-1.60	0.60-1.30-2.00	0.07-0.12-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	39-60	---	---	---	---	0.00-0.01-0.06	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
GmaG:									
Kurtz-------------------	0-6	2-4 -8	70-78-86	12-18-22	1.35-1.43-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-36	2-3 -8	57-67-73	25-30-35	1.35-1.45-1.55	0.60-1.30-2.00	0.10-0.16-0.22	3.00-4.50-5.90	0.0-0.5-1.0
	36-47	2-3 -8	60-69-73	25-28-32	1.50-1.58-1.65	0.60-1.30-2.00	0.05-0.10-0.14	3.00-4.50-5.90	0.0-0.2-0.5
	47-60	---	---	---	---	0.00-0.01-0.06	---	---	---
GyaD2:									
Grayford----------------	0-7	5-12-20	50-69-80	12-19-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-16	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	16-45	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	45-52	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	52-60	---	---	---	---	0.06-1.30-6.00	---	---	---
GyaD3:									
Grayford----------------	0-7	10-20-25	50-58-72	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-12	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	12-42	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	42-49	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	49-60	---	---	---	---	0.06-1.30-6.00	---	---	---
GyaD5:									
Grayford----------------	0-2	10-20-25	50-58-72	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-0.8-1.0
	2-24	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	24-45	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	45-60	---	---	---	---	0.06-1.30-6.00	---	---	---
GykD2:									
Grayford----------------	0-7	5-12-20	50-69-80	12-19-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-16	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	16-45	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	45-52	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	52-60	---	---	---	---	0.20-5.81-20.00	---	---	---
GykD3:									
Grayford----------------	0-7	10-20-25	50-58-72	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-12	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	12-42	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	42-49	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	49-60	---	---	---	---	0.20-5.81-20.00	---	---	---
HcaA:									
Hatfield----------------	0-7	10-17-19	59-65-78	12-18-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-20	8-12-15	59-64-72	20-24-26	1.40-1.50-1.60	0.60-1.30-2.00	0.15-0.18-0.21	0.00-1.50-2.90	0.2-0.4-0.8
	20-36	6-10-15	51-60-70	24-30-34	1.50-1.60-1.70	0.06-0.33-0.60	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	36-78	4-8 -32	34-63-72	24-29-34	1.55-1.65-1.75	0.01-0.18-0.20	0.06-0.09-0.12	0.00-1.50-2.90	0.0-0.2-0.5
	78-83	4-6 -35	33-69-75	20-25-32	1.50-1.60-1.70	0.01-0.10-0.20	0.06-0.09-0.12	0.00-1.50-2.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
HccB2:									
Haubstadt---------------	0-7	5-10-20	60-71-80	14-19-24	1.25-1.43-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-32	5-7 -15	50-65-75	18-28-32	1.30-1.50-1.70	0.60-1.30-2.00	0.14-0.20-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	32-61	7-15-30	40-60-70	22-25-32	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	61-80	7-19-40	30-51-70	25-30-35	1.55-1.60-1.65	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
HcdC2:									
Haubstadt---------------	0-5	5-10-20	60-71-80	14-19-24	1.25-1.43-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-29	5-7 -15	50-65-75	18-28-32	1.30-1.50-1.70	0.60-1.30-2.00	0.14-0.20-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	29-58	7-15-30	40-60-70	22-25-32	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	58-80	7-19-40	30-51-70	25-30-35	1.55-1.60-1.65	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
Shircliff---------------	0-7	2-10-15	60-68-77	18-22-26	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-13	2-6 -10	50-64-75	24-30-36	1.40-1.50-1.60	0.60-1.30-2.00	0.16-0.19-0.22	3.00-4.50-5.90	0.5-0.8-1.0
	13-38	2-4 -10	40-48-60	35-48-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.0-0.5-0.8
	38-49	2-4 -10	50-58-70	27-38-50	1.50-1.58-1.65	0.06-0.13-0.20	0.12-0.17-0.22	3.00-4.50-5.90	0.0-0.2-0.5
	49-60	2-4 -10	50-62-70	24-34-50	1.50-1.58-1.65	0.06-0.13-0.20	0.12-0.17-0.22	3.00-4.50-5.90	0.0-0.2-0.5
HceC3:									
Haubstadt---------------	0-6	5-10-20	60-66-80	18-24-26	1.25-1.43-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	6-17	5-7 -15	50-65-75	18-28-32	1.30-1.50-1.70	0.60-1.30-2.00	0.14-0.20-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	17-47	7-15-30	40-60-70	22-25-32	1.60-1.73-1.85	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	47-80	7-19-40	30-51-70	25-30-35	1.55-1.60-1.65	0.06-0.13-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
Shircliff---------------	0-6	5-8 -15	50-60-70	27-32-35	1.40-1.50-1.60	0.60-1.30-2.00	0.16-0.19-0.21	3.00-4.50-5.90	0.5-1.2-2.0
	6-38	2-2 -10	40-50-60	35-48-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.0-0.5-0.8
	38-45	2-3 -10	50-59-70	27-38-50	1.50-1.58-1.65	0.06-0.13-0.20	0.12-0.17-0.22	3.00-4.50-5.90	0.0-0.2-0.5
	45-60	2-3 -10	50-63-70	24-34-50	1.50-1.58-1.65	0.06-0.13-0.20	0.12-0.17-0.22	3.00-4.50-5.90	0.0-0.2-0.5
HcgAH:									
Haymond-----------------	0-10	1-10-20	60-75-85	10-15-20	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-44	7-19-32	50-67-75	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	44-60	1-28-65	20-57-75	5-15-26	1.30-1.40-1.50	0.60-1.30-2.00	0.14-0.18-0.22	0.00-1.50-2.90	0.0-0.5-1.0
HcgAV:									
Haymond-----------------	0-10	1-10-20	60-75-85	10-15-20	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-44	7-19-32	50-67-75	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	44-60	1-28-65	20-57-75	5-15-26	1.30-1.40-1.50	0.60-1.30-2.00	0.14-0.18-0.22	0.00-1.50-2.90	0.0-0.5-1.0
HcgAW:									
Haymond-----------------	0-9	1-10-20	60-75-85	10-15-20	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-44	7-19-32	50-67-75	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	44-60	1-28-65	20-57-75	5-15-26	1.30-1.40-1.50	0.60-1.30-2.00	0.14-0.18-0.22	0.00-1.50-2.90	0.0-0.5-1.0

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
HerE:									
Hickory-----------------	0-11	25-35-45	30-48-50	9-17-25	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	2.0-3.0-4.0
	11-39	20-30-45	30-39-50	24-31-35	1.45-1.55-1.65	0.60-1.30-2.00	0.15-0.17-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	39-45	25-40-50	30-36-50	15-24-32	1.50-1.60-1.70	0.60-1.30-2.00	0.11-0.15-0.19	0.00-1.50-2.90	0.0-0.2-0.5
	45-60	25-40-60	25-40-50	15-20-30	1.50-1.63-1.75	0.60-1.30-2.00	0.10-0.13-0.15	0.00-1.50-2.90	0.0-0.2-0.5
Bonnell-----------------	0-6	5-15-25	50-65-70	10-20-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.0-6.0
	6-9	12-20-32	40-54-65	20-26-32	1.40-1.50-1.60	0.60-1.30-2.00	0.18-0.20-0.21	3.00-4.50-5.90	0.3-0.5-1.0
	9-44	20-24-35	20-34-48	35-42-48	1.50-1.60-1.70	0.20-0.50-2.00	0.11-0.13-0.15	6.00-7.50-8.90	0.2-0.5-0.8
	44-70	20-30-45	30-41-50	24-29-34	1.50-1.55-1.60	0.20-0.40-0.60	0.12-0.14-0.16	3.00-4.50-5.90	0.2-0.4-0.6
	70-80	25-40-50	25-34-40	18-26-34	1.60-1.70-1.80	0.06-0.33-0.60	0.04-0.08-0.12	3.00-4.50-5.90	0.1-0.2-0.3
HtwD2:									
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.06-1.30-6.00	---	---	---
Caneyville--------------	0-6	5-12-18	56-68-80	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-10	5-10-15	50-59-70	24-31-38	1.40-1.50-1.70	0.60-1.30-2.00	0.13-0.17-0.21	3.00-4.50-5.90	0.0-1.0-1.5
	10-30	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	30-60	---	---	---	---	0.06-1.30-6.00	---	---	---
HtzD3:									
Haggatt-----------------	0-5	2-7 -12	54-67-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.06-1.30-6.00	---	---	---
Caneyville--------------	0-5	5-12-18	51-60-75	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-24	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	24-60	---	---	---	---	0.06-1.30-6.00	---	---	---
HufAK:									
Huntington--------------	0-12	5-10-20	60-67-75	18-23-26	1.30-1.45-1.60	0.60-1.30-2.00	0.24-0.25-0.26	0.00-1.50-2.90	2.0-3.5-4.0
	12-42	5-10-15	60-65-70	24-25-34	1.40-1.50-1.60	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.5-1.2-2.0
	42-80	5-19-60	25-53-70	15-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.10-0.16-0.22	0.00-1.50-2.90	0.0-0.2-0.5
HuhD2:									
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.20-5.81-20.00	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
HuhD2:									
Caneyville--------------	0-6	5-12-18	56-68-80	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-10	5-10-15	50-59-70	24-31-38	1.40-1.50-1.70	0.60-1.30-2.00	0.13-0.17-0.21	3.00-4.50-5.90	0.0-1.0-1.5
	10-36	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	36-60	---	---	---	---	0.20-5.81-20.00	---	---	---
HujD3:									
Haggatt-----------------	0-5	2-7 -12	54-67-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.20-5.81-20.00	---	---	---
Caneyville--------------	0-5	5-12-18	51-60-75	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-24	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	24-60	---	---	---	---	0.20-5.81-20.00	---	---	---
JaeB2:									
Jennings----------------	0-9	6-10-15	60-72-80	10-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	9-27	6-10-15	50-63-70	24-27-32	1.50-1.58-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	27-38	18-25-30	42-51-64	18-24-28	1.65-1.70-1.75	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	38-73	15-28-35	26-37-52	28-35-39	1.55-1.63-1.70	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	73-77	4-6 -8	44-52-58	38-42-48	1.40-1.50-1.60	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.5-1.2-2.0
	77-87	---	---	---	---	0.00-0.18-0.60	---	---	---
JafC2:									
Jennings----------------	0-9	6-10-15	60-72-80	10-18-24	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	9-27	6-10-15	50-63-70	24-27-32	1.50-1.58-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	27-38	18-25-30	42-51-64	18-24-28	1.65-1.70-1.75	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	38-73	15-28-35	26-37-52	28-35-39	1.55-1.63-1.70	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	73-77	4-6 -8	44-52-58	38-42-48	1.40-1.50-1.60	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.5-1.2-2.0
	77-87	---	---	---	---	0.00-0.18-0.60	---	---	---
Blocher, hard bedrock substratum------------	0-9	5-15-25	55-68-80	12-17-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	9-28	5-10-25	45-63-75	20-27-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.5-0.8-1.0
	28-58	25-28-35	20-32-40	35-40-45	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	58-75	10-34-38	20-31-60	30-35-45	1.50-1.60-1.70	0.06-0.13-0.20	0.10-0.13-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	75-85	---	---	---	---	0.00-0.18-0.60	---	---	---
JafC3:									
Jennings----------------	0-3	6-10-15	55-66-75	20-24-26	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	3-17	6-10-15	50-63-70	24-27-32	1.50-1.58-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	17-30	18-25-30	42-51-64	18-24-28	1.65-1.70-1.75	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	30-69	15-28-35	26-37-52	28-35-39	1.55-1.63-1.70	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
	69-75	4-6 -8	44-52-58	38-42-48	1.40-1.50-1.60	0.01-0.10-0.20	0.06-0.07-0.08	3.00-4.50-5.90	0.5-1.2-2.0
	75-85	---	---	---	---	0.00-0.18-0.60	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
JafC3:									
Blocher, hard bedrock substratum-------------	0-3	5-15-25	50-64-77	18-21-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	3-10	5-10-25	45-63-75	20-27-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.5-0.8-1.0
	10-43	25-28-35	20-32-40	35-40-45	1.50-1.60-1.70	0.06-0.13-0.20	0.11-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	43-70	10-34-38	20-31-60	30-35-45	1.50-1.60-1.70	0.06-0.13-0.20	0.10-0.13-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	70-80	---	---	---	---	0.00-0.18-0.60	---	---	---
KxkC2:									
Knobcreek---------------	0-7	2-5 -12	62-75-82	15-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.21-0.24	0.00-1.50-2.90	1.0-1.7-3.0
	7-18	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	18-63	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	63-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Navilleton--------------	0-8	2-4 -12	62-75-80	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-35	2-3 -10	58-69-74	24-28-32	1.40-1.50-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	35-43	3-6 -18	20-34-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	43-72	3-4 -18	20-36-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	72-82	---	---	---	---	0.06-1.30-6.00	---	---	---
KxlC3:									
Knobcreek---------------	0-6	2-5 -12	56-69-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	6-13	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	13-60	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	60-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Haggatt-----------------	0-5	2-7 -12	54-67-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.06-1.30-6.00	---	---	---
Caneyville--------------	0-5	5-12-18	51-60-75	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-24	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	24-60	---	---	---	---	0.06-1.30-6.00	---	---	---
KxlE3:									
Knobcreek---------------	0-6	2-5 -12	56-69-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	6-13	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	13-60	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	60-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Haggatt-----------------	0-5	2-7 -12	54-67-78	20-26-34	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-2.90-5.90	0.5-1.2-2.0
	5-11	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	11-42	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	42-60	---	---	---	---	0.06-1.30-6.00	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
KxlE3:									
Caneyville--------------	0-5	5-12-18	51-60-75	20-28-34	1.20-1.43-1.65	0.60-1.30-2.00	0.14-0.18-0.24	1.50-4.50-5.90	0.5-1.2-2.0
	5-24	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	24-60	---	---	---	---	0.06-1.30-6.00	---	---	---
KxmE2:									
Knobcreek---------------	0-7	2-5 -12	62-75-82	15-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.21-0.24	0.00-1.50-2.90	1.0-1.7-3.0
	7-18	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	18-63	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	63-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.06-1.30-6.00	---	---	---
Caneyville--------------	0-6	5-12-18	56-68-80	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-10	5-10-15	50-59-70	24-31-38	1.40-1.50-1.70	0.60-1.30-2.00	0.13-0.17-0.21	3.00-4.50-5.90	0.0-1.0-1.5
	10-36	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	36-60	---	---	---	---	0.06-1.30-6.00	---	---	---
KxoC2:									
Knobcreek---------------	0-7	2-5 -12	62-75-82	15-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.21-0.24	0.00-1.50-2.90	1.0-1.7-3.0
	7-18	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	18-63	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	63-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Navilleton--------------	0-8	2-4 -12	62-75-80	15-21-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-35	2-3 -10	58-69-74	24-28-32	1.40-1.50-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	35-43	3-6 -18	20-34-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	43-72	3-4 -18	20-36-52	45-60-75	1.30-1.45-1.60	0.06-0.13-0.20	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	72-82	---	---	---	---	0.20-5.81-20.00	---	---	---
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.20-5.81-20.00	---	---	---
KxpD2:									
Knobcreek---------------	0-7	2-5 -12	62-75-82	15-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.21-0.24	0.00-1.50-2.90	1.0-1.7-3.0
	7-18	2-4 -10	52-62-74	24-34-38	1.40-1.50-1.65	0.60-1.30-2.00	0.12-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	18-63	2-3 -20	20-32-53	45-65-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	63-80	2-10-20	20-34-53	45-56-73	1.30-1.45-1.60	0.06-0.20-0.60	0.07-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
KxpD2:									
Haggatt-----------------	0-5	2-7 -12	62-73-82	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	5-16	2-5 -10	56-66-74	24-29-34	1.40-1.55-1.70	0.60-1.30-2.00	0.12-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	16-44	2-6 -10	20-34-53	45-60-75	1.35-1.50-1.65	0.20-0.40-0.60	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.5-1.0
	44-60	---	---	---	---	0.20-5.81-20.00	---	---	---
Caneyville--------------	0-6	5-12-18	56-68-80	12-20-26	1.20-1.43-1.65	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-10	5-10-15	50-59-70	24-31-38	1.40-1.50-1.70	0.60-1.30-2.00	0.13-0.17-0.21	3.00-4.50-5.90	0.0-1.0-1.5
	10-36	5-8 -15	25-39-55	40-53-60	1.35-1.50-1.65	0.20-0.40-0.60	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.8-1.0
	36-60	---	---	---	---	0.20-5.81-20.00	---	---	---
LpoAK:									
Lindside----------------	0-10	2-10-20	54-69-82	15-21-26	1.20-1.40-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-42	2-6 -15	51-66-78	20-28-34	1.40-1.50-1.60	0.60-1.30-2.00	0.17-0.20-0.22	3.00-4.50-5.90	0.5-1.2-2.0
	42-80	2-6 -25	51-70-80	18-24-34	1.40-1.50-1.60	0.60-1.30-2.00	0.17-0.20-0.22	0.00-2.90-5.90	0.5-1.0-1.5
McgC2:									
Markland----------------	0-6	2-8 -12	62-69-78	20-23-26	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-25	2-3 -10	35-52-63	35-45-55	1.55-1.60-1.65	0.20-0.40-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	25-42	2-3 -10	35-57-63	35-40-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.16-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	42-80	2-6 -10	40-58-78	20-36-50	1.50-1.58-1.65	0.06-0.33-0.60	0.12-0.17-0.22	3.00-4.50-5.90	0.5-0.8-1.0
McnGQ:									
Markland----------------	0-4	2-8 -12	62-68-78	20-24-26	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.5-5.0
	4-28	2-3 -10	35-52-63	35-45-55	1.55-1.60-1.65	0.20-0.40-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	28-59	2-3 -10	35-57-63	35-40-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.16-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	59-80	2-6 -10	40-58-78	20-36-50	1.50-1.58-1.65	0.06-0.33-0.60	0.12-0.17-0.22	3.00-4.50-5.90	0.5-0.8-1.0
McpC3:									
Markland----------------	0-4	2-8 -12	53-60-71	27-32-35	1.40-1.50-1.60	0.60-1.30-2.00	0.16-0.19-0.21	3.00-4.50-5.90	0.5-1.2-2.0
	4-25	2-3 -10	35-52-63	35-45-55	1.55-1.60-1.65	0.20-0.40-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	25-42	2-3 -10	35-57-63	35-40-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.16-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	42-80	2-6 -10	40-58-78	20-36-50	1.50-1.58-1.65	0.06-0.33-0.60	0.12-0.17-0.22	3.00-4.50-5.90	0.5-0.8-1.0
McuDQ:									
Markland----------------	0-4	2-8 -12	53-60-71	27-32-35	1.40-1.50-1.60	0.60-1.30-2.00	0.16-0.19-0.21	3.00-4.50-5.90	0.5-1.2-2.0
	4-18	2-3 -10	35-52-63	35-45-55	1.55-1.60-1.65	0.20-0.40-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	18-40	2-3 -10	35-57-63	35-40-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.16-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	40-80	2-6 -10	40-58-78	20-36-50	1.50-1.58-1.65	0.06-0.33-0.60	0.12-0.17-0.22	3.00-4.50-5.90	0.5-0.8-1.0
MdqDQ:									
Markland----------------	0-6	2-8 -12	62-69-78	20-23-26	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	6-25	2-3 -10	35-52-63	35-45-55	1.55-1.60-1.65	0.20-0.40-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	25-42	2-3 -10	35-57-63	35-40-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.16-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	42-80	2-6 -10	40-58-78	20-36-50	1.50-1.58-1.65	0.06-0.33-0.60	0.12-0.17-0.22	3.00-4.50-5.90	0.5-0.8-1.0

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
MhuA:									
McGary------------------	0-11	2-7 -10	64-69-78	20-24-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	11-42	2-4 -6	40-51-63	35-45-55	1.45-1.53-1.60	0.06-0.33-0.60	0.11-0.15-0.18	6.00-7.50-8.90	0.0-0.5-1.0
	42-50	1-5 -20	40-50-64	35-45-55	1.45-1.53-1.60	0.01-0.10-0.20	0.11-0.15-0.18	6.00-7.50-8.90	0.0-0.2-0.5
	50-60	1-5 -20	40-56-64	24-39-50	1.50-1.58-1.65	0.01-0.04-0.06	0.11-0.15-0.18	3.00-4.50-5.90	0.0-0.2-0.5
MhyA:									
Medora------------------	0-9	5-8 -15	60-76-83	12-16-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-28	5-6 -15	55-68-71	24-26-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	28-48	25-31-55	30-48-55	12-21-30	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	48-80	30-46-60	12-18-40	27-36-44	1.40-1.50-1.60	0.20-1.10-2.00	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
MhyB2:									
Medora------------------	0-8	5-8 -15	60-74-83	12-18-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-21	5-6 -15	55-68-71	24-26-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	21-45	25-31-55	30-48-55	12-21-30	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	45-80	30-46-60	12-18-40	27-36-44	1.40-1.50-1.60	0.20-1.10-2.00	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
MhyC2:									
Medora------------------	0-8	5-8 -15	60-74-83	12-18-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-21	5-6 -15	55-68-71	24-26-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	21-45	25-31-55	30-48-55	12-21-30	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	45-80	30-46-60	12-18-40	27-36-44	1.40-1.50-1.60	0.20-1.10-2.00	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
MhyC3:									
Medora------------------	0-7	5-8 -15	59-70-79	16-22-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-16	5-6 -15	55-68-71	24-26-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	16-35	25-31-55	30-48-55	12-21-30	1.70-1.75-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	35-80	30-46-60	12-18-40	27-36-44	1.40-1.50-1.60	0.20-1.10-2.00	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
MsvA:									
Montgomery--------------	0-15	1-2 -10	50-60-64	35-38-40	1.30-1.43-1.55	0.60-1.30-2.00	0.17-0.20-0.22	3.00-4.50-5.90	2.0-3.5-5.0
	15-24	1-2 -10	40-53-59	40-45-50	1.45-1.55-1.65	0.06-0.33-0.60	0.11-0.13-0.14	6.00-7.50-8.90	0.5-1.2-2.0
	24-48	1-2 -10	40-60-64	35-38-50	1.45-1.55-1.65	0.06-0.13-0.20	0.11-0.15-0.18	6.00-7.50-8.90	0.5-0.8-1.0
	48-60	1-2 -10	42-60-71	28-38-48	1.50-1.55-1.60	0.06-0.13-0.20	0.11-0.15-0.18	3.00-4.50-5.90	0.5-0.8-1.0
NaaA:									
Nabb--------------------	0-10	10-17-28	56-72-80	8-11-16	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-18	10-16-22	56-69-76	13-15-20	1.40-1.50-1.60	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	18-35	10-13-18	52-60-70	20-27-30	1.50-1.58-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	35-76	16-22-30	50-56-66	18-22-28	1.65-1.73-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	76-80	26-28-40	22-41-48	24-31-38	1.60-1.65-1.70	0.01-0.03-0.06	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
NaaB2:									
Nabb--------------------	0-7	10-17-28	50-70-75	10-13-22	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-13	10-16-22	58-69-77	13-15-20	1.40-1.50-1.60	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	13-33	10-13-18	52-60-70	20-27-30	1.50-1.58-1.65	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	33-71	16-22-30	50-56-66	18-22-28	1.65-1.73-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	71-80	26-28-40	22-41-48	24-31-38	1.60-1.65-1.70	0.01-0.03-0.06	0.06-0.07-0.08	3.00-4.50-5.90	0.0-0.2-0.5
NbhAK:									
Newark------------------	0-7	2-10-20	55-70-82	14-20-26	1.20-1.40-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-66	2-8 -15	51-66-80	18-26-34	1.20-1.40-1.60	0.60-1.30-2.00	0.16-0.19-0.22	3.00-4.50-5.90	0.5-1.2-2.0
	66-80	2-8 -20	51-66-80	12-26-40	1.30-1.45-1.60	0.60-1.30-2.00	0.14-0.17-0.20	3.00-4.50-5.90	0.0-1.0-2.0
OfbAW:									
Oldenburg---------------	0-9	22-40-52	30-45-60	8-15-18	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.20-0.22	0.00-1.50-2.90	1.0-1.8-2.0
	9-25	32-48-67	25-39-60	8-13-18	1.35-1.45-1.55	0.60-1.30-2.00	0.13-0.14-0.22	0.00-1.50-2.90	0.5-0.8-1.0
	25-60	40-70-80	15-22-42	5-8-18	1.35-1.45-1.55	0.60-2.83-6.00	0.09-0.14-0.19	0.00-1.50-2.90	0.0-0.2-0.5
PcrB2:									
Pekin-------------------	0-10	3-12-20	60-73-87	10-15-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	10-24	3-7 -18	52-71-79	18-22-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.21	0.00-1.50-2.90	0.5-0.8-1.0
	24-45	3-9 -18	50-65-77	20-26-32	1.70-1.75-1.80	0.01-0.18-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	45-80	10-20-60	30-58-60	10-22-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
PcrC2:									
Pekin-------------------	0-8	3-12-20	60-73-87	10-15-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-28	3-7 -18	52-71-79	18-22-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.21	0.00-1.50-2.90	0.5-0.8-1.0
	28-57	3-9 -18	50-65-77	20-26-32	1.70-1.75-1.80	0.01-0.18-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	57-80	10-20-60	30-58-60	10-22-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
PcrC3:									
Pekin-------------------	0-6	3-12-20	60-73-87	10-15-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	6-18	3-7 -18	52-71-79	18-22-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.21	0.00-1.50-2.90	0.5-0.8-1.0
	18-42	3-9 -18	50-65-77	20-26-32	1.70-1.75-1.80	0.01-0.18-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	42-80	10-20-60	30-58-60	10-22-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
PhaA:									
Peoga-------------------	0-8	2-10-20	60-73-85	12-17-22	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-19	2-10-20	60-72-83	14-18-22	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.24-0.27	0.00-1.50-2.90	0.0-0.5-1.0
	19-36	5-11-25	50-63-75	18-26-34	1.40-1.48-1.55	0.20-0.40-0.60	0.14-0.19-0.24	0.00-1.50-2.90	0.0-0.2-0.5
	36-76	5-13-35	40-61-70	18-26-34	1.40-1.58-1.75	0.01-0.18-0.20	0.06-0.11-0.15	0.00-1.50-2.90	0.0-0.2-0.5
	76-80	5-13-35	40-59-70	22-28-34	1.35-1.45-1.55	0.01-0.13-0.20	0.06-0.08-0.10	0.00-1.50-2.90	0.0-0.2-0.5
Pml.									
Pits, quarry									

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
Ppu.									
Pits, sand and gravel									
RblD3:									
Rarden------------------	0-4	1-5 -10	52-63-72	27-32-38	1.35-1.45-1.55	0.20-0.40-0.60	0.20-0.22-0.23	3.00-4.50-5.90	0.5-1.2-2.0
	4-24	1-4 -10	30-50-62	35-46-60	1.40-1.50-1.60	0.06-0.13-0.20	0.10-0.12-0.14	3.00-4.50-5.90	0.0-0.5-1.0
	24-32	1-4 -10	40-54-65	30-42-58	1.40-1.53-1.65	0.01-0.10-0.20	0.06-0.09-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	32-60	---	---	---	---	0.00-0.01-0.06	---	---	---
RbmD5:									
Rarden------------------	0-20	1-5 -10	40-50-64	35-45-55	1.40-1.50-1.60	0.06-0.13-0.20	0.07-0.12-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	20-26	1-4 -10	40-54-65	30-42-60	1.40-1.53-1.65	0.01-0.10-0.20	0.06-0.09-0.12	3.00-4.50-5.90	0.0-0.2-0.5
	26-60	---	---	---	---	0.00-0.01-0.06	---	---	---
RptG:									
Rohan-------------------	0-4	4-8 -20	54-72-81	15-20-26	1.20-1.35-1.50	0.60-1.30-2.00	0.10-0.13-0.16	0.00-1.50-2.90	1.0-2.0-3.0
	4-16	4-8 -20	50-66-78	18-26-34	1.20-1.40-1.60	0.20-1.10-2.00	0.04-0.07-0.10	0.00-1.50-2.90	0.0-0.5-1.0
	16-40	---	---	---	---	0.00-0.18-0.60	---	---	---
Jessietown--------------	0-5	5-8 -15	60-72-83	12-20-26	1.20-1.30-1.40	0.60-1.30-2.00	0.18-0.21-0.23	0.00-1.50-2.90	2.0-3.0-4.0
	5-23	1-4 -15	50-68-79	20-28-34	1.20-1.35-1.50	0.60-1.30-2.00	0.16-0.18-0.23	0.00-1.50-2.90	0.5-1.2-2.0
	23-30	5-9 -15	40-51-60	27-40-45	1.20-1.35-1.50	0.60-1.30-2.00	0.06-0.11-0.18	0.00-1.50-2.90	0.5-1.2-2.0
	30-40	---	---	---	---	0.00-0.18-0.60	---	---	---
RtcA:									
Ryker-------------------	0-9	1-6 -10	70-79-87	12-15-20	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	9-12	2-5 -10	64-74-80	18-21-26	1.35-1.50-1.60	0.60-1.30-2.00	0.20-0.21-0.27	0.00-1.50-2.90	0.5-0.8-1.0
	12-38	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	38-67	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	67-80	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
RtcB2:									
Ryker-------------------	0-6	1-6 -10	66-75-87	15-19-24	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	6-10	2-5 -10	64-74-80	18-21-26	1.35-1.50-1.60	0.60-1.30-2.00	0.20-0.21-0.27	0.00-1.50-2.90	0.5-0.8-1.0
	10-34	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	34-63	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	63-80	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
RzrB2:									
Ryker-------------------	0-6	1-6 -10	66-75-87	15-19-24	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	6-10	2-5 -10	64-74-80	18-21-26	1.35-1.50-1.60	0.60-1.30-2.00	0.20-0.21-0.27	0.00-1.50-2.90	0.5-0.8-1.0
	10-34	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	34-63	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	63-80	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
RztC2:									
Ryker-------------------	0-8	1-6 -10	66-75-87	15-19-24	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-32	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	32-58	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	58-80	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Grayford----------------	0-8	5-12-20	54-69-83	12-19-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-18	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	18-43	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	43-50	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	50-60	---	---	---	---	0.06-1.30-6.00	---	---	---
RztC3:									
Ryker-------------------	0-7	1-6 -10	64-71-79	20-23-26	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-25	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	25-54	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	54-80	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
Grayford----------------	0-7	10-20-25	50-58-72	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-12	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	12-42	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	42-52	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	52-60	---	---	---	---	0.06-1.30-6.00	---	---	---
RzvC2:									
Ryker-------------------	0-8	1-6 -10	66-75-87	15-19-24	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-32	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	32-58	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	58-78	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	78-80	---	---	---	---	0.20-5.81-20.00	---	---	---
Grayford----------------	0-8	5-12-20	54-69-83	12-19-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	8-18	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	18-43	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	43-50	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	50-60	---	---	---	---	0.20-5.81-20.00	---	---	---
RzvC3:									
Ryker-------------------	0-7	1-6 -10	64-71-79	20-23-26	1.30-1.48-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-25	2-7 -10	58-66-78	22-27-32	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.17-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	25-54	10-18-35	25-52-68	22-30-38	1.40-1.53-1.65	0.60-1.30-2.00	0.12-0.16-0.20	3.00-4.50-5.90	0.0-0.2-0.5
	54-78	1-5 -10	15-40-59	40-55-75	1.35-1.50-1.65	0.60-1.30-2.00	0.06-0.11-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	78-80	---	---	---	---	0.20-5.81-20.00	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
RzvC3:									
Grayford----------------	0-7	10-20-25	50-58-72	18-22-26	1.20-1.43-1.65	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	7-12	10-20-25	50-54-68	22-26-33	1.40-1.55-1.70	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	12-42	20-28-35	26-42-56	24-30-39	1.35-1.50-1.65	0.60-1.30-2.00	0.12-0.14-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	42-52	5-18-20	15-28-53	42-54-80	1.35-1.50-1.65	0.60-1.30-2.00	0.07-0.12-0.16	6.00-7.50-8.90	0.0-0.2-0.5
	52-60	---	---	---	---	0.20-5.81-20.00	---	---	---
SceB2:									
Scottsburg--------------	0-8	8-14-20	60-69-80	12-17-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-31	8-10-15	55-63-68	24-27-30	1.50-1.55-1.60	0.60-1.30-2.00	0.14-0.19-0.24	3.00-4.50-5.90	0.0-0.2-0.5
	31-53	12-13-18	48-56-64	24-31-34	1.60-1.65-1.70	0.01-0.18-0.20	0.08-0.11-0.14	3.00-4.50-5.90	0.0-0.2-0.5
	53-61	2-5 -8	40-50-58	35-45-55	1.50-1.55-1.60	0.06-0.18-0.20	0.08-0.11-0.14	3.00-4.50-5.90	0.5-0.8-1.0
	61-67	---	---	---	---	0.00-0.01-0.06	---	---	---
	67-80	---	---	---	---	0.00-0.18-0.60	---	---	---
SfyB:									
Shircliff---------------	0-8	2-10-15	59-71-83	15-19-26	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-19	2-6 -10	54-62-74	24-32-36	1.40-1.50-1.60	0.60-1.30-2.00	0.16-0.19-0.22	3.00-4.50-5.90	0.5-0.8-1.0
	19-43	2-4 -10	40-51-63	35-45-55	1.55-1.60-1.65	0.06-0.33-0.60	0.12-0.15-0.18	6.00-7.50-8.90	0.0-0.5-1.0
	43-80	2-4 -10	40-56-74	24-40-50	1.50-1.58-1.65	0.06-0.13-0.20	0.12-0.17-0.22	3.00-4.50-5.90	0.0-0.2-0.5
SoaB:									
Spickert----------------	0-7	1-6 -10	66-77-85	10-17-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-31	1-2 -5	63-70-75	24-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	31-58	8-10-25	47-67-78	14-23-28	1.60-1.70-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	58-64	8-10-35	40-66-78	14-24-33	1.50-1.60-1.70	0.06-0.33-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	64-80	---	---	---	---	0.00-0.18-0.60	---	---	---
SodB:									
Spickert----------------	0-10	1-6 -10	66-77-85	10-17-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	10-34	1-2 -5	63-70-75	24-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	34-65	8-10-25	47-67-78	14-23-28	1.60-1.70-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	65-72	8-10-35	40-66-78	14-24-33	1.50-1.60-1.70	0.06-0.33-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	72-82	---	---	---	---	0.00-0.18-0.60	---	---	---
SolC2:									
Spickert----------------	0-7	1-6 -10	64-75-85	10-19-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-31	1-2 -5	63-70-75	24-28-32	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	31-58	8-10-25	47-67-78	14-23-28	1.60-1.70-1.80	0.01-0.06-0.20	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	58-64	8-10-35	40-66-78	14-24-33	1.50-1.60-1.70	0.06-0.33-0.60	0.06-0.07-0.08	0.00-1.50-2.90	0.0-0.2-0.5
	64-80	---	---	---	---	0.00-0.18-0.60	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
SolC2:									
Wrays-------------------	0-7	2-3 -12	62-79-84	14-18-26	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.9-3.0
	7-30	2-3 -12	54-67-76	22-30-34	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.19-0.24	3.00-4.50-5.90	0.5-0.8-1.0
	30-39	6-12-15	51-57-70	24-31-34	1.40-1.50-1.60	0.60-1.30-2.00	0.13-0.17-0.20	3.00-4.50-5.90	0.0-0.5-1.0
	39-49	8-12-20	50-71-80	12-17-30	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.12-0.17	0.00-1.50-2.90	0.0-0.2-0.5
	49-60	---	---	---	---	0.00-0.18-0.60	---	---	---
StaAQ:									
Steff-------------------	0-11	3-6 -15	65-81-87	10-13-25	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	11-41	3-8 -20	50-74-85	12-18-30	1.30-1.43-1.55	0.60-1.30-2.00	0.18-0.21-0.23	0.00-1.50-2.90	0.0-0.5-1.0
	41-60	3-10-55	35-70-75	10-20-25	1.40-1.53-1.65	0.60-1.84-6.00	0.08-0.15-0.21	0.00-1.50-2.90	0.0-0.2-0.5
StdAQ:									
Stendal-----------------	0-8	3-6 -15	60-78-85	12-16-26	1.30-1.43-1.55	0.60-1.30-2.00	0.22-0.23-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-40	3-8 -20	62-69-79	18-23-34	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.0-0.5-1.0
	40-60	3-10-45	40-67-75	15-23-34	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.0-0.2-0.5
StdAW:									
Stendal-----------------	0-8	3-6 -15	65-78-85	12-16-26	1.30-1.43-1.55	0.60-1.30-2.00	0.22-0.23-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-40	3-8 -20	62-69-79	18-23-34	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.0-0.5-1.0
	40-60	3-10-45	40-67-75	15-23-34	1.35-1.45-1.55	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.0-0.2-0.5
ThaC2:									
Trappist----------------	0-7	1-7 -15	59-73-84	15-20-26	1.20-1.38-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-24	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	24-31	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	31-41	---	---	---	---	0.00-0.18-0.60	---	---	---
ThbC3:									
Trappist----------------	0-6	1-7 -15	50-60-64	27-33-35	1.20-1.38-1.55	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-1.2-2.0
	6-21	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	21-24	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	24-40	---	---	---	---	0.00-0.18-0.60	---	---	---
ThbD5:									
Trappist----------------	0-3	1-7 -20	41-60-72	27-33-39	1.35-1.45-1.55	0.60-1.30-2.00	0.12-0.16-0.20	0.00-1.50-2.90	0.1-0.5-1.0
	3-20	1-6 -20	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	20-30	---	---	---	---	0.00-0.01-0.06	---	---	---
	30-40	---	---	---	---	0.00-0.18-0.60	---	---	---
ThcD3:									
Trappist----------------	0-4	1-7 -15	50-60-64	27-33-35	1.20-1.38-1.55	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-1.2-2.0
	4-21	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	21-27	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	27-40	---	---	---	---	0.00-0.18-0.60	---	---	---

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea-bility (Ksat)	Available water capacity	Linear extensi-bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
ThcD3:									
Rohan-------------------	0-3	4-8 -20	50-64-69	27-28-32	1.20-1.35-1.50	0.60-1.30-2.00	0.10-0.13-0.16	0.00-1.50-2.90	0.5-1.2-2.0
	3-12	4-8 -20	50-64-78	18-28-34	1.20-1.40-1.60	0.20-1.10-2.00	0.04-0.07-0.10	0.00-1.50-2.90	0.0-0.5-1.0
	12-40	---	---	---	---	0.00-0.18-0.60	---	---	---
ThdD:									
Trappist----------------	0-6	1-7 -15	63-75-85	14-18-22	1.20-1.38-1.55	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	6-30	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	30-35	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	35-45	---	---	---	---	0.00-0.18-0.60	---	---	---
Rohan-------------------	0-3	4-8 -20	60-72-81	15-20-26	1.20-1.30-1.40	0.60-1.30-2.00	0.12-0.15-0.18	0.00-1.50-2.90	2.0-3.0-4.0
	3-16	4-8 -20	50-66-78	18-26-34	1.20-1.40-1.60	0.20-1.10-2.00	0.04-0.07-0.10	0.00-1.50-2.90	0.0-0.5-1.0
	16-40	---	---	---	---	0.00-0.18-0.60	---	---	---
TsaC3:									
Trappist----------------	0-6	1-7 -15	50-60-64	27-33-35	1.20-1.38-1.55	0.60-1.30-2.00	0.15-0.19-0.23	0.00-1.50-2.90	0.5-1.2-2.0
	6-21	1-6 -15	40-53-64	35-41-48	1.40-1.53-1.65	0.20-0.40-0.60	0.11-0.15-0.19	3.00-4.50-5.90	0.0-0.2-0.5
	21-24	5-8 -20	32-57-65	30-35-48	1.40-1.50-1.60	0.06-0.13-0.20	0.06-0.11-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	24-40	---	---	---	---	0.00-0.18-0.60	---	---	---
Deputy------------------	0-2	2-6 -10	64-70-78	20-24-26	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	2-20	2-6 -10	55-63-74	24-31-35	1.35-1.45-1.55	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.5-1.0
	20-43	2-11-20	30-44-58	40-45-50	1.40-1.50-1.60	0.06-0.13-0.20	0.08-0.12-0.16	3.00-4.50-5.90	0.0-0.2-0.5
	43-60	---	---	---	---	0.00-0.10-0.20	---	---	---
	60-80	---	---	---	---	0.00-0.30-0.60	---	---	---
Uaa. Udorthents, cut and filled									
UaoAK: Udifluvents, cut and filled.									
Urban land.									
UedA: Urban land.									
Aquents, clayey substratum.									

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
UndAY:									
Urban land.									
Udifluvents.									
UngB:									
Urban land.									
Udarents, fragipan substratum.									
UnkB:									
Urban land.									
Udarents, silty substratum.									
UnpA:									
Urban land.									
Udarents, loamy substratum.									
UnsB:									
Urban land.									
Udarents, clayey substratum.									
W.									
Water									
WaaAV:									
Wakeland----------------	0-7	3-12-20	62-75-85	10-13-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-29	3-13-20	62-73-85	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	29-60	5-20-45	40-66-75	10-14-20	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.0-0.2-0.5
WaaAW:									
Wakeland----------------	0-7	3-12-20	62-75-85	10-13-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-29	3-13-20	62-73-85	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	29-60	5-20-45	40-66-75	10-14-20	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	0.0-0.2-0.5

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
WedB2:									
Weddel------------------	0-8	6-12-20	60-70-80	12-18-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	1.0-1.8-3.0
	8-26	6-8 -15	50-65-70	24-27-30	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.3-0.5
	26-39	15-19-25	40-56-65	22-25-30	1.60-1.65-1.70	0.01-0.18-0.20	0.08-0.09-0.10	0.00-1.50-2.90	0.0-0.2-0.5
	39-66	15-17-25	30-44-50	34-39-45	1.50-1.60-1.70	0.06-0.13-0.20	0.08-0.09-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	66-75	1-3 -5	40-55-60	35-42-50	1.40-1.50-1.60	0.01-0.04-0.06	0.05-0.08-0.10	3.00-4.50-5.90	0.0-0.2-0.5
	75-80	---	---	---	---	0.00-0.01-0.06	---	---	---
WhcD:									
Wellrock----------------	0-4	2-4 -5	73-80-88	10-16-22	1.30-1.40-1.50	0.60-1.30-2.00	0.18-0.21-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	4-8	2-2 -5	69-78-84	14-20-26	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.24-0.27	0.00-1.50-2.90	0.5-0.8-1.5
	8-28	2-2 -5	61-69-74	24-29-34	1.40-1.50-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.5-0.8-1.0
	28-36	2-4 -5	63-69-83	15-27-32	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.13-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	36-52	2-4 -5	63-72-83	15-24-32	1.40-1.50-1.60	0.20-0.40-0.60	0.06-0.13-0.20	0.00-1.50-2.90	0.0-0.2-0.5
	52-60	---	---	---	---	0.00-0.01-0.06	---	---	---
Gnawbone----------------	0-7	5-10-15	65-75-85	10-15-20	1.30-1.35-1.40	0.60-1.30-2.00	0.16-0.20-0.24	0.00-1.50-2.90	2.0-3.0-4.0
	7-35	5-8 -15	61-63-71	24-29-34	1.40-1.50-1.60	0.60-1.30-2.00	0.11-0.16-0.20	0.00-1.50-2.90	0.0-0.5-1.0
	35-39	5-7 -15	60-70-80	15-23-32	1.40-1.50-1.60	0.60-1.30-2.00	0.07-0.12-0.16	0.00-1.50-2.90	0.0-0.2-0.5
	39-60	---	---	---	---	0.00-0.01-0.06	---	---	---
WnmA:									
Whitcomb----------------	0-9	4-7 -12	64-72-84	12-21-24	1.30-1.45-1.60	0.60-1.30-2.00	0.18-0.22-0.24	0.00-1.50-2.90	1.0-1.5-2.0
	9-15	4-5 -12	62-70-76	20-25-26	1.40-1.50-1.60	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.0-0.5-1.0
	15-30	4-4 -12	56-68-72	24-28-32	1.50-1.55-1.60	0.60-1.30-2.00	0.14-0.18-0.21	3.00-4.50-5.90	0.0-0.2-0.5
	30-48	5-5 -12	53-63-68	27-32-35	1.60-1.65-1.70	0.01-0.18-0.20	0.09-0.11-0.15	3.00-4.50-5.90	0.0-0.2-0.5
	48-56	5-7 -10	40-53-60	35-40-50	1.50-1.55-1.60	0.06-0.13-0.20	0.09-0.11-0.15	3.00-4.50-5.90	0.0-0.3-0.5
	56-61	5-7 -10	45-56-60	35-37-45	1.50-1.55-1.60	0.06-0.13-0.20	0.09-0.11-0.15	3.00-4.50-5.90	0.0-1.2-2.0
	61-80	---	---	---	---	0.00-0.18-0.60	---	---	---
WokAV:									
Wilbur------------------	0-7	1-9 -15	67-77-85	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-32	5-12-20	62-72-85	10-16-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	32-60	5-17-45	40-67-78	10-16-26	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.5-0.8-1.0
WokAW:									
Wilbur------------------	0-7	1-9 -15	67-77-85	10-14-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	7-32	5-12-20	62-72-85	10-16-18	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.22-0.24	0.00-1.50-2.90	0.5-1.2-2.0
	32-60	5-17-45	40-67-78	10-16-26	1.30-1.40-1.50	0.60-1.30-2.00	0.20-0.21-0.22	0.00-1.50-2.90	0.5-0.8-1.0

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
WprAW:									
Wirt--------------------	0-8	27-41-55	35-45-55	10-14-18	1.30-1.43-1.55	0.60-1.30-2.00	0.19-0.22-0.24	0.00-1.50-2.90	1.0-2.0-3.0
	8-38	27-41-60	22-43-55	7-16-18	1.40-1.48-1.55	0.60-1.30-2.00	0.11-0.16-0.20	0.00-1.50-2.90	0.0-0.5-1.0
	38-60	32-55-80	10-35-50	4-10-18	1.45-1.53-1.60	0.60-3.30-6.00	0.07-0.13-0.19	0.00-1.50-2.90	0.0-0.2-0.5

Table 18.--Erosion Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. The abbreviation "rv" stands for representative value. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
AddA:								
Avonburg	0-11	.55	.55	4	5	56	150	0.9
	11-21	.55	.55					
	21-37	.49	.49					
	37-52	.55	.55					
	52-83	.55	.55					
	83-90	.37	.43					
AddB2:								
Avonburg	0-7	.55	.55	4	5	56	100	3.0
	7-16	.55	.55					
	16-32	.49	.49					
	32-42	.55	.55					
	42-63	.55	.55					
	63-80	.37	.43					
BbhA:								
Bartle	0-8	.55	.55	4	5	56	250	0.9
	8-17	.55	.55					
	17-30	.55	.55					
	30-50	.55	.55					
	50-80	.55	.55					
BcrAQ:								
Beanblossom	0-5	.43	.49	4	5	56	300	2.0
	5-24	.20	.43					
	24-54	.10	.32					
	54-60	---	---					
BcrAW:								
Beanblossom	0-5	.43	.49	4	5	56	300	2.0
	5-24	.20	.43					
	24-54	.10	.32					
	54-60	---	---					
BdoA:								
Bedford	0-9	.55	.55	4	5	56	200	0.9
	9-24	.55	.55					
	24-51	.37	.55					
	51-80	.20	.24					
BdoB:								
Bedford	0-9	.55	.55	4	5	56	250	4.0
	9-24	.55	.55					
	24-51	.37	.55					
	51-80	.20	.24					
BfbC2:								
Blocher, soft bedrock substratum	0-8	.49	.49	3	6	48	120	9.0
	8-20	.43	.43					
	20-61	.28	.32					
	61-80	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
BfbC2:								
Weddel------------------	0-8	.55	.55	4	6	48	120	9.0
	8-30	.49	.49					
	30-50	.43	.55					
	50-62	.24	.32					
	62-67	.32	.37					
	67-80	---	---					
BfcC3:								
Blocher, soft bedrock substratum------------	0-6	.43	.43	2	6	48	120	9.0
	6-11	.32	.32					
	11-61	.28	.32					
	61-80	---	---					
Weddel------------------	0-6	.49	.49	2	6	48	120	9.0
	6-17	.49	.49					
	17-38	.43	.55					
	38-55	.24	.32					
	55-61	.32	.37					
	61-80	---	---					
BnyD3:								
Bonnell-----------------	0-3	.28	.28	4	6	48	100	17.0
	3-32	.17	.20					
	32-54	.24	.28					
	54-80	.24	.28					
BobE5:								
Bonnell-----------------	0-3	.28	.28	4	6	48	100	23.0
	3-25	.17	.20					
	25-38	.24	.28					
	38-60	.24	.28					
Hickory-----------------	0-3	.28	.28	4	6	48	100	23.0
	3-35	.24	.28					
	35-40	.24	.28					
	40-60	.28	.32					
BodAW:								
Bonnie------------------	0-8	.43	.43	5	6	48	300	0.3
	8-38	.43	.43					
	38-60	.43	.43					
BvoG:								
Brownstown--------------	0-6	.32	.43	2	5	56	200	50.0
	6-18	.32	.64					
	18-36	.10	.64					
	36-60	---	---					
Gilwood-----------------	0-6	.32	.43	2	5	56	200	38.0
	6-11	.37	.55					
	11-22	.28	.55					
	22-32	.10	.55					
	32-60	---	---					
CcaG:								
Caneyville--------------	0-8	.32	.37	2	5	56	150	41.0
	8-14	.43	.43					
	14-33	.17	.20					
	33-60	---	---					
Rock outcrop.								

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
CkkB2:								
Cincinnati	0-8	.55	.55	4	5	56	175	4.0
	8-31	.55	.55					
	31-72	.49	.49					
	72-80	.32	.37					
CldC2:								
Cincinnati	0-8	.55	.55	4	5	56	120	9.0
	8-24	.55	.55					
	24-74	.49	.49					
	74-80	.32	.37					
Blocher	0-7	.49	.49	3	5	56	120	9.0
	7-17	.49	.49					
	17-44	.24	.32					
	44-76	.28	.32					
	76-80	.37	.43					
CldC3:								
Cincinnati	0-5	.49	.49	2	6	48	120	9.0
	5-14	.55	.55					
	14-35	.49	.49					
	35-78	.32	.37					
	78-84	.32	.37					
Blocher	0-5	.49	.49	2	6	48	120	9.0
	5-18	.49	.49					
	18-47	.24	.32					
	47-64	.28	.32					
	64-80	.37	.43					
ClfA:								
Cobbsfork	0-12	.55	.55	4	5	56	350	0.5
	12-18	.55	.55					
	18-38	.55	.55					
	38-50	.49	.49					
	50-85	.49	.49					
	85-90	.32	.37					
ComC:								
Coolville	0-8	.49	.49	4	5	56	120	9.0
	8-21	.43	.49					
	21-37	.32	.37					
	37-44	.32	.43					
	44-60	---	---					
ConC3:								
Coolville	0-4	.49	.49	3	6	48	120	9.0
	4-17	.43	.49					
	17-38	.32	.37					
	38-43	.32	.43					
	43-60	---	---					
Rarden	0-6	.49	.49	2	6	48	120	9.0
	6-28	.24	.28					
	28-37	.32	.43					
	37-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
ConD:								
Coolville---------------	0-5	.49	.49	4	5	56	100	15.0
	5-18	.43	.49					
	18-39	.32	.37					
	39-45	.32	.43					
	45-60	---	---					
Rarden------------------	0-4	.43	.43	3	6	48	100	15.0
	4-28	.24	.28					
	28-36	.32	.43					
	36-60	---	---					
CspA:								
Crider------------------	0-9	.43	.43	5	5	56	400	1.0
	9-43	.49	.49					
	43-80	.10	.15					
CspB2:								
Crider------------------	0-7	.43	.43	5	6	48	180	4.0
	7-36	.49	.49					
	36-80	.10	.15					
CtrB2:								
Crider------------------	0-7	.43	.43	5	6	48	180	3.5
	7-36	.49	.49					
	36-75	.10	.15					
	75-100	---	---					
CtwB:								
Crider------------------	0-8	.43	.43	5	5	56	250	4.0
	8-34	.49	.49					
	34-46	.49	.49					
	46-80	.15	.20					
Bedford-----------------	0-9	.55	.55	4	5	56	250	4.0
	9-24	.55	.55					
	24-51	.37	.55					
	51-80	.20	.24					
Navilleton--------------	0-8	.49	.49	5	5	56	250	4.0
	8-35	.49	.49					
	35-65	.24	.28					
	65-79	.24	.24					
	79-83	---	---					
CwaAQ:								
Cuba--------------------	0-10	.43	.43	5	5	56	300	1.0
	10-47	.49	.49					
	47-60	.43	.55					
CxgC3:								
Crider------------------	0-7	.43	.43	4	6	48	160	9.0
	7-30	.49	.49					
	30-80	.10	.15					
Haggatt-----------------	0-5	.37	.43	2	6	48	160	9.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
CxhC2:								
Crider	0-7	.43	.43	5	6	48	160	9.0
	7-36	.49	.49					
	36-80	.10	.15					
Haggatt	0-5	.43	.43	3	5	56	160	9.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
CxmC2:								
Crider	0-7	.43	.43	5	6	48	125	9.0
	7-43	.49	.49					
	43-75	.10	.15					
	75-80	---	---					
Haggatt	0-5	.43	.43	3	6	48	125	9.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
CxnC3:								
Crider	0-7	.43	.43	4	6	48	125	9.0
	7-30	.49	.49					
	30-75	.10	.15					
	75-80	---	---					
Haggatt	0-5	.37	.43	2	6	48	125	9.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					
DbrG:								
Deam	0-3	.43	.43	3	6	48	120	38.0
	3-24	.43	.43					
	24-36	.37	.37					
	36-60	---	---					
DdsAW:								
Dearborn	0-10	.20	.24	3	4L	86	250	1.0
	10-16	.20	.24					
	16-60	.02	.10					
DfnA:								
Dubois	0-10	.55	.55	4	5	56	250	0.9
	10-17	.55	.55					
	17-38	.55	.55					
	38-82	.55	.55					
	82-96	.43	.43					
DtvC2:								
Deputy	0-8	.49	.49	4	5	56	120	9.0
	8-27	.49	.49					
	27-53	.28	.32					
	53-77	---	---					
	77-87	---	---					
Trappist	0-7	.49	.49	2	5	56	120	9.0
	7-24	.32	.37					
	24-31	.32	.37					
	31-41	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
EbpD2:								
Eden---------------------	0-5	.17	.37	3	4	86	150	19.0
	5-23	.15	.24					
	23-60	---	---					
EesA:								
Elkinsville-------------	0-8	.43	.43	5	5	56	200	1.0
	8-38	.43	.43					
	38-75	.28	.32					
	75-80	.28	.32					
Millstone---------------	0-12	.43	.43	5	5	56	200	1.0
	12-59	.43	.49					
	59-80	.28	.55					
EesB:								
Elkinsville-------------	0-8	.43	.43	5	5	56	175	4.0
	8-34	.43	.43					
	34-60	.28	.32					
	60-80	.28	.32					
Millstone---------------	0-10	.43	.43	5	5	56	175	4.0
	10-62	.43	.49					
	62-80	.28	.55					
EesC2:								
Elkinsville-------------	0-7	.43	.43	5	5	56	125	9.0
	7-30	.43	.43					
	30-56	.28	.32					
	56-80	.28	.32					
Millstone---------------	0-7	.43	.43	5	5	56	125	9.0
	7-58	.43	.49					
	58-80	.28	.55					
EesD2:								
Elkinsville-------------	0-7	.43	.43	5	5	56	70	15.0
	7-30	.43	.43					
	30-56	.28	.32					
	56-80	.28	.32					
Millstone---------------	0-7	.43	.43	5	5	56	70	15.0
	7-58	.43	.49					
	58-80	.28	.55					
EesFQ:								
Elkinsville-------------	0-5	.43	.43	5	5	56	35	29.0
	5-24	.43	.43					
	24-50	.28	.32					
	50-80	.28	.32					
Millstone---------------	0-6	.43	.43	5	5	56	35	29.0
	6-54	.43	.49					
	54-80	.28	.55					
EsaG:								
Eden---------------------	0-6	.37	.37	3	4	86	150	41.0
	6-11	.15	.24					
	11-39	.15	.24					
	39-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
GgbG:								
Gilwood-----------------	0-6	.32	.43	2	5	56	200	38.0
	6-11	.37	.55					
	11-22	.28	.55					
	22-32	.10	.55					
	32-60	---	---					
Brownstown--------------	0-6	.32	.43	2	5	56	200	48.0
	6-18	.32	.64					
	18-36	.10	.64					
	36-60	---	---					
GgfD:								
Gilwood-----------------	0-6	.32	.43	2	5	56	120	13.0
	6-11	.37	.55					
	11-22	.28	.55					
	22-32	.10	.55					
	32-42	---	---					
Wrays-------------------	0-6	.43	.43	3	5	56	120	13.0
	6-25	.49	.49					
	25-34	.37	.49					
	34-44	.17	.55					
	44-54	---	---					
GgfE2:								
Gilwood-----------------	0-6	.32	.43	2	5	56	120	20.0
	6-11	.37	.55					
	11-22	.28	.55					
	22-32	.10	.55					
	32-60	---	---					
Wrays-------------------	0-6	.43	.43	3	5	56	120	15.0
	6-25	.49	.49					
	25-34	.37	.49					
	34-44	.17	.55					
	44-60	---	---					
GmaG:								
Gnawbone----------------	0-7	.43	.43	3	5	56	300	45.0
	7-27	.43	.49					
	27-39	.49	.55					
	39-60	---	---					
Kurtz-------------------	0-6	.37	.43	4	5	56	300	35.0
	6-36	.43	.49					
	36-47	.43	.49					
	47-60	---	---					
GyaD2:								
Grayford----------------	0-7	.43	.43	3	5	56	100	17.0
	7-16	.43	.43					
	16-45	.24	.28					
	45-52	.15	.24					
	52-60	---	---					
GyaD3:								
Grayford----------------	0-7	.43	.43	2	6	48	100	17.0
	7-12	.43	.43					
	12-42	.24	.28					
	42-49	.15	.24					
	49-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
GyaD5:								
Grayford	0-2	.43	.43	2	6	48	100	17.0
	2-24	.24	.28					
	24-45	.15	.24					
	45-60	---	---					
GykD2:								
Grayford	0-7	.43	.43	3	5	56	100	17.0
	7-16	.43	.43					
	16-45	.24	.28					
	45-52	.15	.24					
	52-60	---	---					
GykD3:								
Grayford	0-7	.43	.43	2	6	48	100	17.0
	7-12	.43	.43					
	12-42	.24	.28					
	42-49	.15	.24					
	49-60	---	---					
HcaA:								
Hatfield	0-7	.49	.55	4	5	56	300	0.9
	7-20	.49	.55					
	20-36	.43	.49					
	36-78	.49	.55					
	78-83	.49	.55					
HccB2:								
Haubstadt	0-7	.55	.55	4	5	56	175	4.0
	7-32	.55	.55					
	32-61	.43	.49					
	61-80	.43	.64					
HcdC2:								
Haubstadt	0-5	.55	.55	4	5	56	120	9.0
	5-29	.55	.55					
	29-58	.43	.49					
	58-80	.43	.64					
Shircliff	0-7	.49	.49	4	6	48	120	11.0
	7-13	.43	.43					
	13-38	.32	.32					
	38-49	.43	.43					
	49-60	.43	.43					
HceC3:								
Haubstadt	0-6	.49	.49	2	6	48	120	9.0
	6-17	.55	.55					
	17-47	.43	.49					
	47-80	.43	.64					
Shircliff	0-6	.49	.49	3	6	48	120	11.0
	6-38	.32	.32					
	38-45	.43	.43					
	45-60	.43	.43					
HcgAH:								
Haymond	0-10	.43	.43	5	5	56	300	1.0
	10-44	.55	.55					
	44-60	.43	.49					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
HcgAV:								
Haymond	0-10	.43	.43	5	5	56	300	1.0
	10-44	.55	.55					
	44-60	.43	.49					
HcgAW:								
Haymond	0-9	.43	.43	5	5	56	300	1.0
	9-44	.55	.55					
	44-60	.43	.49					
HerE:								
Hickory	0-11	.32	.32	5	5	56	100	21.0
	11-39	.24	.28					
	39-45	.24	.28					
	45-60	.28	.32					
Bonnell	0-6	.43	.43	5	5	56	100	15.0
	6-9	.49	.49					
	9-44	.17	.20					
	44-70	.24	.28					
	70-80	.24	.28					
HtwD2:								
Haggatt	0-5	.43	.43	3	6	48	100	17.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
Caneyville	0-6	.37	.43	2	6	48	100	19.0
	6-10	.43	.43					
	10-30	.17	.20					
	30-60	---	---					
HtzD3:								
Haggatt	0-5	.37	.43	2	6	48	100	17.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					
Caneyville	0-5	.32	.43	1	6	48	100	19.0
	5-24	.17	.20					
	24-60	---	---					
HufAK:								
Huntington	0-12	.32	.32	5	6	48	300	1.0
	12-42	.37	.37					
	42-80	.43	.43					
HuhD2:								
Haggatt	0-5	.43	.43	3	6	48	100	17.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
Caneyville	0-6	.37	.43	2	6	48	100	19.0
	6-10	.43	.43					
	10-36	.17	.20					
	36-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
HujD3:								
Haggatt	0-5	.37	.43	2	6	48	100	17.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					
Caneyville	0-5	.37	.37	1	6	48	100	19.0
	5-24	.17	.20					
	24-60	---	---					
JaeB2:								
Jennings	0-9	.55	.55	4	5	56	175	4.0
	9-27	.55	.55					
	27-38	.49	.49					
	38-73	.28	.32					
	73-77	.37	.37					
	77-87	---	---					
JafC2:								
Jennings	0-9	.55	.55	4	5	56	120	9.0
	9-27	.55	.55					
	27-38	.49	.49					
	38-73	.28	.32					
	73-77	.37	.37					
	77-87	---	---					
Blocher, hard bedrock substratum	0-9	.49	.49	3	5	56	175	9.0
	9-28	.49	.49					
	28-58	.24	.32					
	58-75	.24	.32					
	75-85	---	---					
JafC3:								
Jennings	0-3	.49	.49	2	6	48	120	9.0
	3-17	.55	.55					
	17-30	.49	.49					
	30-69	.28	.32					
	69-75	.37	.37					
	75-85	---	---					
Blocher, hard bedrock substratum	0-3	.49	.49	2	6	48	120	9.0
	3-10	.49	.49					
	10-43	.24	.32					
	43-70	.24	.32					
	70-80	---	---					
KxkC2:								
Knobcreek	0-7	.49	.49	5	6	48	150	9.0
	7-18	.43	.49					
	18-63	.24	.28					
	63-80	.20	.24					
Navilleton	0-8	.49	.49	5	6	48	150	9.0
	8-35	.49	.49					
	35-43	.24	.28					
	43-72	.24	.24					
	72-82	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
KxlC3:								
Knobcreek---------------	0-6	.43	.49	4	6	48	150	9.0
	6-13	.43	.49					
	13-60	.24	.28					
	60-80	.20	.24					
Haggatt-----------------	0-5	.37	.43	2	6	48	150	9.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					
Caneyville--------------	0-5	.37	.37	1	6	48	150	9.0
	5-24	.17	.20					
	24-60	---	---					
KxlE3:								
Knobcreek---------------	0-6	.43	.49	4	6	48	100	18.0
	6-13	.43	.49					
	13-60	.24	.28					
	60-80	.20	.24					
Haggatt-----------------	0-5	.37	.43	2	6	48	100	18.0
	5-11	.28	.37					
	11-42	.15	.15					
	42-60	---	---					
Caneyville--------------	0-5	.32	.43	1	6	48	100	18.0
	5-24	.17	.20					
	24-60	---	---					
KxmE2:								
Knobcreek---------------	0-7	.49	.49	5	6	48	100	18.0
	7-18	.43	.49					
	18-63	.24	.28					
	63-80	.20	.24					
Haggatt-----------------	0-5	.43	.43	3	6	48	100	18.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
Caneyville--------------	0-6	.37	.43	2	6	48	100	18.0
	6-10	.43	.43					
	10-36	.17	.20					
	36-60	---	---					
KxoC2:								
Knobcreek---------------	0-7	.49	.49	5	6	48	150	9.0
	7-18	.43	.49					
	18-63	.24	.28					
	63-80	.20	.24					
Navilleton--------------	0-8	.49	.49	5	6	48	150	7.0
	8-35	.49	.49					
	35-43	.24	.28					
	43-72	.24	.24					
	72-82	---	---					
Haggatt-----------------	0-5	.43	.43	3	6	48	150	9.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors			Wind erodi- bility group	Wind erodi- bility index	Slope length (rv)	Slope gradient (rv)
		Kw	Kf	T				
	In						Ft	Pct
KxpD2:								
Knobcreek----------------	0-7	.49	.49	5	6	48	100	16.0
	7-18	.43	.49					
	18-63	.24	.28					
	63-80	.20	.24					
Haggatt------------------	0-5	.43	.43	3	6	48	100	16.0
	5-16	.28	.37					
	16-44	.15	.15					
	44-60	---	---					
Caneyville---------------	0-6	.37	.43	2	6	48	100	18.0
	6-10	.43	.43					
	10-36	.17	.20					
	36-60	---	---					
LpoAK:								
Lindside-----------------	0-10	.43	.43	5	6	48	300	0.9
	10-42	.37	.37					
	42-80	.37	.37					
McgC2:								
Markland-----------------	0-6	.49	.49	4	6	48	150	9.0
	6-25	.28	.28					
	25-42	.32	.32					
	42-80	.43	.43					
McnGQ:								
Markland-----------------	0-4	.43	.43	4	6	48	100	36.0
	4-28	.28	.28					
	28-59	.32	.32					
	59-80	.43	.43					
McpC3:								
Markland-----------------	0-4	.43	.43	3	6	48	150	9.0
	4-25	.28	.28					
	25-42	.32	.32					
	42-80	.43	.43					
McuDQ:								
Markland-----------------	0-4	.43	.43	3	6	48	100	17.0
	4-18	.28	.28					
	18-40	.32	.32					
	40-80	.43	.43					
MdqDQ:								
Markland-----------------	0-6	.49	.49	4	6	48	100	17.0
	6-25	.28	.28					
	25-42	.32	.32					
	42-80	.43	.43					
MhuA:								
McGary-------------------	0-11	.49	.49	4	6	48	200	0.9
	11-42	.37	.37					
	42-50	.28	.28					
	50-60	.32	.32					
MhyA:								
Medora-------------------	0-9	.55	.55	4	5	56	200	0.9
	9-28	.55	.55					
	28-48	.37	.43					
	48-80	.20	.24					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
MhyB2:								
Medora------------------	0-8	.55	.55	4	5	56	175	4.0
	8-21	.55	.55					
	21-45	.37	.43					
	45-80	.20	.24					
MhyC2:								
Medora------------------	0-8	.55	.55	4	5	56	120	9.0
	8-21	.55	.55					
	21-45	.37	.43					
	45-80	.20	.24					
MhyC3:								
Medora------------------	0-7	.49	.49	2	6	48	120	9.0
	7-16	.55	.55					
	16-35	.37	.43					
	35-80	.20	.24					
MsvA:								
Montgomery--------------	0-15	.32	.32	4	4	86	250	0.3
	15-24	.32	.32					
	24-48	.32	.32					
	48-60	.43	.43					
NaaA:								
Nabb--------------------	0-10	.55	.55	4	5	56	200	0.9
	10-18	.55	.55					
	18-35	.55	.55					
	35-76	.49	.49					
	76-80	.32	.37					
NaaB2:								
Nabb--------------------	0-7	.55	.55	4	5	56	175	4.0
	7-13	.55	.55					
	13-33	.55	.55					
	33-71	.49	.49					
	71-80	.32	.37					
NbhAK:								
Newark------------------	0-7	.43	.43	5	6	48	300	0.5
	7-66	.43	.43					
	66-80	.49	.49					
OfbAW:								
Oldenburg---------------	0-9	.37	.37	5	5	56	300	0.9
	9-25	.32	.37					
	25-60	.24	.37					
PcrB2:								
Pekin-------------------	0-10	.55	.55	4	5	56	175	4.0
	10-24	.55	.55					
	24-45	.55	.55					
	45-80	.49	.55					
PcrC2:								
Pekin-------------------	0-8	.55	.55	4	5	56	120	9.0
	8-28	.55	.55					
	28-57	.55	.55					
	57-80	.49	.55					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
PcrC3:								
Pekin	0-6	.55	.55	2	5	56	120	9.0
	6-18	.55	.55					
	18-42	.55	.55					
	42-80	.49	.55					
PhaA:								
Peoga	0-8	.55	.55	5	5	56	300	0.5
	8-19	.55	.55					
	19-36	.55	.55					
	36-76	.55	.55					
	76-80	.55	.55					
Pml. Pits, quarry								
Ppu. Pits, sand and gravel								
RblD3:								
Rarden	0-4	.49	.49	2	6	48	100	15.0
	4-24	.24	.28					
	24-32	.32	.43					
	32-60	---	---					
RbmD5:								
Rarden	0-20	.24	.28	2	4	86	100	13.0
	20-26	.32	.43					
	26-60	---	---					
RptG:								
Rohan	0-4	.24	.43	1	5	56	120	43.0
	4-16	.10	.43					
	16-40	---	---					
Jessietown	0-5	.43	.43	2	5	56	120	38.0
	5-23	.43	.49					
	23-30	.15	.37					
	30-40	---	---					
RtcA:								
Ryker	0-9	.43	.43	5	5	56	250	1.0
	9-12	.49	.49					
	12-38	.49	.49					
	38-67	.24	.32					
	67-80	.17	.20					
RtcB2:								
Ryker	0-6	.43	.43	5	5	56	250	4.0
	6-10	.49	.49					
	10-34	.49	.49					
	34-63	.24	.32					
	63-80	.17	.20					
RzrB2:								
Ryker	0-6	.43	.43	5	5	56	250	3.5
	6-10	.49	.49					
	10-34	.49	.49					
	34-63	.24	.32					
	63-80	.17	.20					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
RztC2:								
Ryker	0-8	.43	.43	5	5	56	155	9.0
	8-32	.49	.49					
	32-58	.24	.32					
	58-80	.17	.20					
Grayford	0-8	.43	.43	3	5	56	155	9.0
	8-18	.43	.43					
	18-43	.24	.28					
	43-50	.15	.24					
	50-60	---	---					
RztC3:								
Ryker	0-7	.43	.43	4	6	48	155	9.0
	7-25	.49	.49					
	25-54	.24	.32					
	54-80	.17	.20					
Grayford	0-7	.43	.43	2	6	48	155	9.0
	7-12	.43	.43					
	12-42	.24	.28					
	42-52	.15	.24					
	52-60	---	---					
RzvC2:								
Ryker	0-8	.43	.43	5	5	56	125	7.0
	8-32	.49	.49					
	32-58	.24	.32					
	58-78	.17	.20					
	78-80	---	---					
Grayford	0-8	.43	.43	3	5	56	125	9.0
	8-18	.43	.43					
	18-43	.24	.28					
	43-50	.15	.24					
	50-60	---	---					
RzvC3:								
Ryker	0-7	.43	.43	4	6	48	125	7.0
	7-25	.49	.49					
	25-54	.24	.32					
	54-78	.17	.20					
	78-80	---	---					
Grayford	0-7	.43	.43	2	5	56	125	9.0
	7-12	.43	.43					
	12-42	.24	.28					
	42-52	.15	.24					
	52-60	---	---					
SceB2:								
Scottsburg	0-8	.49	.49	4	5	56	175	3.0
	8-31	.49	.49					
	31-53	.37	.43					
	53-61	.32	.32					
	61-67	---	---					
	67-80	---	---					
SfyB:								
Shircliff	0-8	.49	.49	4	5	56	250	4.0
	8-19	.43	.43					
	19-43	.28	.28					
	43-80	.37	.37					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
SoaB:								
Spickert----------------	0-7	.55	.55	4	5	56	175	4.0
	7-31	.55	.55					
	31-58	.49	.55					
	58-64	.28	.49					
	64-80	---	---					
SodB:								
Spickert----------------	0-10	.55	.55	4	5	56	175	2.5
	10-34	.55	.55					
	34-65	.49	.55					
	65-72	.28	.49					
	72-82	---	---					
SolC2:								
Spickert----------------	0-7	.55	.55	4	5	56	150	9.0
	7-31	.55	.55					
	31-58	.49	.55					
	58-64	.28	.49					
	64-80	---	---					
Wrays-------------------	0-7	.43	.43	3	5	56	120	9.0
	7-30	.49	.49					
	30-39	.37	.49					
	39-49	.17	.55					
	49-60	---	---					
StaAQ:								
Steff-------------------	0-11	.43	.43	5	5	56	300	0.9
	11-41	.49	.49					
	41-60	.28	.49					
StdAQ:								
Stendal-----------------	0-8	.43	.43	5	5	56	300	0.5
	8-40	.49	.49					
	40-60	.49	.49					
StdAW:								
Stendal-----------------	0-8	.43	.43	5	5	56	300	0.5
	8-40	.49	.49					
	40-60	.49	.49					
ThaC2:								
Trappist----------------	0-7	.49	.49	2	5	56	120	9.0
	7-24	.32	.37					
	24-31	.32	.37					
	31-41	---	---					
ThbC3:								
Trappist----------------	0-6	.43	.43	1	6	48	120	9.0
	6-21	.32	.37					
	21-24	.32	.37					
	24-40	---	---					
ThbD5:								
Trappist----------------	0-3	.43	.43	1	6	48	100	13.0
	3-20	.32	.37					
	20-30	---	---					
	30-40	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
ThcD3:								
Trappist	0-4	.43	.43	1	6	48	100	15.0
	4-21	.32	.37					
	21-27	.32	.37					
	27-40	---	---					
Rohan	0-3	.24	.43	1	5	56	100	19.0
	3-12	.10	.43					
	12-40	---	---					
ThdD:								
Trappist	0-6	.43	.43	2	5	56	100	15.0
	6-30	.32	.37					
	30-35	.32	.37					
	35-45	---	---					
Rohan	0-3	.43	.43	1	5	56	100	19.0
	3-16	.10	.43					
	16-40	---	---					
TsaC3:								
Trappist	0-6	.43	.43	1	6	48	120	9.0
	6-21	.32	.37					
	21-24	.32	.37					
	24-40	---	---					
Deputy	0-2	.49	.49	3	6	48	120	9.0
	2-20	.49	.49					
	20-43	.28	.32					
	43-60	---	---					
	60-80	---	---					
Uaa. Udorthents, cut and filled								
UaoAK: Udifluvents, cut and filled.								
Urban land.								
UedA: Urban land.								
Aquents, clayey substratum.								
UndAY: Urban land.								
Udifluvents.								
UngB: Urban land.								
Udarents, fragipan substratum.								

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
UnkB:								
Urban land.								
Udarents, silty substratum.								
UnpA:								
Urban land.								
Udarents, loamy substratum.								
UnsB:								
Urban land.								
Udarents, clayey substratum.								
W.								
Water								
WaaAV:								
Wakeland----------------	0-7	.43	.43	5	5	56	300	0.5
	7-29	.55	.55					
	29-60	.49	.49					
WaaAW:								
Wakeland----------------	0-7	.43	.43	5	5	56	300	0.5
	7-29	.55	.55					
	29-60	.49	.49					
WedB2:								
Weddel------------------	0-8	.55	.55	4	5	56	175	4.0
	8-26	.49	.49					
	26-39	.43	.55					
	39-66	.24	.32					
	66-75	.32	.37					
	75-80	---	---					
WhcD:								
Wellrock----------------	0-4	.43	.43	4	5	56	120	13.0
	4-8	.55	.55					
	8-28	.49	.49					
	28-36	.43	.49					
	36-52	.43	.49					
	52-60	---	---					
Gnawbone----------------	0-7	.43	.43	3	5	56	120	13.0
	7-35	.43	.49					
	35-39	.49	.55					
	39-60	---	---					
WnmA:								
Whitcomb----------------	0-9	.55	.55	4	6	48	300	1.0
	9-15	.55	.55					
	15-30	.43	.43					
	30-48	.43	.43					
	48-56	.32	.37					
	56-61	.37	.37					
	61-80	---	---					

Table 18.--Erosion Properties of the Soils--Continued

Map symbol and soil name	Depth	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index	Slope length (rv)	Slope gradient (rv)
	In						Ft	Pct
WokAV:								
Wilbur------------------	0-7	.43	.43	5	5	56	300	0.9
	7-32	.55	.55					
	32-60	.49	.49					
WokAW:								
Wilbur------------------	0-7	.43	.43	5	5	56	300	0.9
	7-32	.55	.55					
	32-60	.49	.49					
WprAW:								
Wirt--------------------	0-8	.37	.37	5	5	56	300	1.0
	8-38	.32	.37					
	38-60	.24	.37					

Table 19.--Chemical Properties of the Soils

(The properties are displayed as low, representative, and high values separated by hyphens. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
AddA:					
Avonburg-------------	0-11	7.0-12.0-20.0	4.0-6.0-10.0	4.5-5.9-7.3	0
	11-21	5.0-7.0-10.0	4.0-6.0-8.0	4.5-5.0-6.5	0
	21-37	---	12.0-13.0-16.0	3.5-4.3-5.0	0
	37-52	---	8.0-10.0-12.0	3.5-4.3-5.0	0
	52-83	---	8.0-10.0-12.0	3.5-4.5-5.5	0
	83-90	16.0-20.0-24.0	13.0-17.0-20.0	5.1-5.9-7.3	0
AddB2:					
Avonburg-------------	0-7	7.0-12.0-20.0	4.0-6.0-10.0	4.5-5.9-7.3	0
	7-16	5.0-7.0-10.0	4.0-6.0-8.0	4.5-5.0-6.5	0
	16-32	---	12.0-13.0-16.0	3.5-4.3-5.0	0
	32-42	---	8.0-10.0-12.0	3.5-4.3-5.0	0
	42-63	---	8.0-10.0-12.0	3.5-4.5-5.5	0
	63-80	16.0-20.0-24.0	13.0-17.0-20.0	5.1-5.9-7.3	0
BbhA:					
Bartle---------------	0-8	5.0-10.0-15.0	3.0-7.0-12.0	4.5-5.9-7.3	0
	8-17	4.0-8.0-14.0	3.0-7.0-12.0	3.5-5.1-6.0	0
	17-30	10.0-13.0-19.0	8.0-11.0-15.0	3.5-4.4-6.0	0
	30-50	10.0-13.0-19.0	8.0-11.0-15.0	3.5-4.5-5.5	0
	50-80	6.0-11.0-14.0	5.0-9.0-12.0	4.5-5.0-7.3	0
BcrAQ:					
Beanblossom----------	0-5	7.0-13.0-19.0	5.0-11.0-17.0	5.1-6.2-7.3	0
	5-24	5.0-9.0-14.0	3.0-7.0-12.0	5.1-6.0-7.3	0
	24-54	4.0-9.0-14.0	---	5.6-6.0-6.5	0
	54-60	---	---	---	---
BcrAW:					
Beanblossom----------	0-5	7.0-13.0-19.0	5.0-11.0-17.0	5.1-6.2-7.3	0
	5-24	5.0-9.0-14.0	3.0-7.0-12.0	5.1-6.0-7.3	0
	24-54	4.0-9.0-14.0	---	5.6-6.0-6.5	0
	54-60	---	---	---	---
BdoA:					
Bedford--------------	0-9	10.0-15.0-20.0	6.0-8.0-12.0	4.5-5.9-7.3	0
	9-24	11.0-16.0-25.0	9.0-14.0-22.0	3.5-5.2-6.0	0
	24-51	9.0-14.0-17.0	8.0-12.0-15.0	3.5-4.5-5.5	0
	51-80	21.0-34.0-48.0	18.0-31.0-45.0	3.5-5.1-5.5	0
BdoB:					
Bedford--------------	0-9	10.0-15.0-20.0	6.0-8.0-12.0	4.5-5.9-7.3	0
	9-24	11.0-16.0-25.0	9.0-14.0-22.0	3.5-5.2-6.0	0
	24-51	9.0-14.0-17.0	8.0-12.0-15.0	3.5-4.5-5.5	0
	51-80	21.0-34.0-48.0	18.0-31.0-45.0	3.5-5.1-5.5	0
BfbC2:					
Blocher, soft bedrock substratum----------	0-8	9.0-14.0-20.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	8-20	10.0-13.0-16.0	8.0-11.0-14.0	4.5-4.6-6.5	0
	20-61	24.0-26.0-30.0	22.0-24.0-28.0	4.5-4.8-7.3	0
	61-80	---	---	4.5-5.4-6.5	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
BfbC2:					
Weddel---------------	0-8	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-30	12.0-14.0-17.0	10.0-12.0-15.0	4.5-5.0-7.3	0
	30-50	---	10.0-12.0-15.0	4.5-4.7-5.0	0
	50-62	---	15.0-18.0-20.0	4.5-4.8-5.5	0
	62-67	17.0-20.0-22.0	15.0-18.0-20.0	4.5-4.8-6.0	0
	67-80	---	---	5.1-5.4-6.0	---
BfcC3:					
Blocher, soft bedrock substratum----------	0-6	12.0-17.0-24.0	8.0-11.0-14.0	4.5-5.9-7.3	0
	6-11	10.0-13.0-16.0	8.0-11.0-14.0	4.5-4.6-5.5	0
	11-61	24.0-26.0-30.0	22.0-24.0-28.0	4.5-4.8-7.3	0
	61-80	---	---	4.5-5.4-6.5	---
Weddel---------------	0-6	11.0-14.0-20.0	5.0-10.0-15.0	4.5-5.9-7.3	0
	6-17	---	10.0-12.0-15.0	4.5-5.0-7.3	0
	17-38	---	10.0-12.0-15.0	4.5-4.7-5.0	0
	38-55	17.0-20.0-24.0	15.0-18.0-20.0	4.5-4.8-5.5	0
	55-61	17.0-20.0-22.0	15.0-18.0-20.0	4.5-4.8-6.0	0
	61-80	---	---	4.5-5.4-6.5	---
BnyD3:					
Bonnell--------------	0-3	12.0-16.0-20.0	8.0-12.0-16.0	4.5-5.9-7.3	0
	3-32	17.0-23.0-28.0	15.0-19.0-25.0	4.5-5.0-6.5	0
	32-54	12.0-19.0-25.0	---	6.1-6.5-7.8	0-0-10
	54-80	8.0-11.0-18.0	---	7.4-7.9-8.4	10-18-25
BobE5:					
Bonnell--------------	0-3	12.0-16.0-20.0	8.0-12.0-16.0	4.5-5.9-7.3	0
	3-25	17.0-23.0-28.0	15.0-19.0-25.0	4.5-5.0-6.5	0
	25-38	11.0-19.0-25.0	---	6.1-6.5-7.8	0-0-10
	38-60	8.0-11.0-18.0	---	7.4-7.9-8.4	10-18-25
Hickory--------------	0-3	12.0-16.0-20.0	8.0-12.0-16.0	4.5-5.9-7.3	0
	3-35	10.0-16.0-25.0	8.0-14.0-20.0	4.5-5.3-6.0	0
	35-40	9.0-14.0-19.0	---	5.6-6.5-7.8	0-0-15
	40-60	5.0-10.0-15.0	---	7.4-7.9-8.4	5-20-25
BodAW:					
Bonnie---------------	0-8	10.0-13.0-22.0	7.0-10.0-19.0	4.5-5.9-7.3	0
	8-38	10.0-12.0-17.0	7.0-9.0-14.0	4.5-5.2-6.5	0
	38-60	10.0-12.0-17.0	7.0-9.0-14.0	4.5-5.4-6.5	0
BvoG:					
Brownstown-----------	0-6	5.0-6.0-10.0	3.0-4.0-6.0	3.5-4.5-6.5	0
	6-18	---	2.0-4.0-6.0	3.5-4.5-5.5	0
	18-36	---	2.0-4.0-6.0	3.5-4.6-5.5	0
	36-60	---	---	---	---
Gilwood--------------	0-6	5.0-9.0-15.0	4.0-8.0-12.0	4.5-5.5-6.5	0
	6-11	---	6.0-8.0-10.0	4.5-5.0-5.5	0
	11-22	---	6.0-8.0-10.0	3.5-4.6-5.0	0
	22-32	---	6.0-8.0-10.0	3.5-4.6-5.0	0
	32-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
CcaG:					
Caneyville-----------	0-8	10.0-14.0-20.0	5.0-11.0-16.0	5.1-5.8-7.3	0
	8-14	10.0-15.0-20.0	8.0-12.0-16.0	5.1-5.8-7.3	0
	14-33	20.0-29.0-37.0	16.0-23.0-30.0	5.1-5.8-7.8	0-0-5
	33-60	---	---	---	---
Rock outcrop.					
CkkB2:					
Cincinnati-----------	0-8	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	8-31	6.0-11.0-14.0	5.0-9.0-12.0	4.5-4.9-6.5	0
	31-72	6.0-10.0-14.0	5.0-7.0-12.0	4.5-4.9-6.0	0
	72-80	10.0-15.0-22.0	8.0-13.0-18.0	4.5-5.5-6.5	0
CldC2:					
Cincinnati-----------	0-8	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	8-24	6.0-11.0-14.0	5.0-9.0-12.0	4.5-4.9-6.5	0
	24-74	6.0-10.0-14.0	5.0-7.0-12.0	4.5-4.9-6.0	0
	74-80	10.0-15.0-22.0	8.0-13.0-18.0	4.5-5.5-6.5	0
Blocher--------------	0-7	9.0-11.0-20.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	7-17	10.0-12.0-14.0	8.0-10.0-12.0	4.5-5.0-6.5	0
	17-44	---	10.0-15.0-22.0	4.5-4.9-5.5	0
	44-76	18.0-20.0-26.0	---	5.6-6.7-7.8	0-0-5
	76-80	4.0-8.0-15.0	---	7.4-7.9-8.4	5-18-25
CldC3:					
Cincinnati-----------	0-5	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	5-14	6.0-11.0-14.0	5.0-9.0-12.0	4.5-4.9-6.5	0
	14-35	6.0-10.0-14.0	5.0-7.0-12.0	4.5-4.9-6.0	0
	35-78	10.0-15.0-22.0	8.0-13.0-18.0	4.5-5.5-6.5	0
	78-84	4.0-8.0-15.0	---	6.1-7.6-8.4	0-18-25
Blocher--------------	0-5	9.0-11.0-20.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	5-18	10.0-12.0-14.0	8.0-10.0-12.0	4.5-5.0-6.5	0
	18-47	---	10.0-15.0-22.0	4.5-4.9-5.5	0
	47-64	18.0-20.0-26.0	---	5.6-6.7-7.8	0-0-5
	64-80	4.0-8.0-15.0	---	7.4-7.9-8.4	5-18-25
ClfA:					
Cobbsfork------------	0-12	6.0-10.0-18.0	3.0-7.0-10.0	4.5-5.9-7.3	0
	12-18	5.0-7.0-10.0	4.0-6.0-8.0	4.5-5.0-6.5	0
	18-38	---	6.0-11.0-15.0	3.5-4.5-5.0	0
	38-50	---	8.0-10.0-12.0	3.5-4.5-5.0	0
	50-85	---	8.0-10.0-12.0	3.5-4.8-5.5	0
	85-90	15.0-19.0-24.0	13.0-16.0-20.0	5.1-6.2-7.3	0
ComC:					
Coolville------------	0-8	7.0-13.0-20.0	4.0-7.0-15.0	3.5-4.4-7.3	0
	8-21	---	7.0-12.0-15.0	3.5-4.4-5.5	0
	21-37	---	15.0-19.0-25.0	3.5-4.5-5.5	0
	37-44	---	11.0-13.0-16.0	4.5-5.0-5.5	0
	44-60	---	---	4.5-5.4-6.5	---
ConC3:					
Coolville------------	0-4	7.0-13.0-20.0	4.0-7.0-15.0	3.5-5.4-7.3	0
	4-17	8.0-14.0-17.0	7.0-12.0-15.0	3.5-4.4-5.5	0
	17-38	17.0-23.0-31.0	15.0-19.0-25.0	3.5-4.5-5.5	0
	38-43	13.0-15.0-19.0	11.0-13.0-16.0	4.5-5.0-5.5	0
	43-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
ConC3:					
Rarden---------------	0-6	15.0-20.0-25.0	11.0-14.0-17.0	3.5-5.8-7.3	0
	6-28	15.0-21.0-30.0	13.0-18.0-24.0	3.5-4.4-5.5	0
	28-37	11.0-13.0-16.0	9.0-11.0-14.0	3.5-4.4-5.5	0
	37-60	---	---	---	---
ConD:					
Coolville------------	0-5	7.0-13.0-20.0	4.0-7.0-15.0	3.5-4.4-7.3	0
	5-18	---	7.0-12.0-15.0	3.5-4.4-5.5	0
	18-39	---	15.0-19.0-25.0	3.5-4.5-5.5	0
	39-45	---	11.0-13.0-16.0	4.5-5.0-5.5	0
	45-60	---	---	4.5-5.4-6.5	---
Rarden---------------	0-4	15.0-19.0-24.0	12.0-16.0-20.0	3.5-4.6-7.3	0
	4-28	---	13.0-18.0-24.0	3.5-4.4-5.5	0
	28-36	---	9.0-11.0-14.0	3.5-4.4-5.5	0
	36-60	---	---	4.5-5.4-6.5	---
CspA:					
Crider---------------	0-9	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	9-43	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	43-80	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
CspB2:					
Crider---------------	0-7	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	7-36	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	36-80	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
CtrB2:					
Crider---------------	0-7	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	7-36	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	36-75	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
	75-100	---	---	---	---
CtwB:					
Crider---------------	0-8	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	8-34	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	34-46	10.0-13.0-24.0	9.0-11.0-20.0	4.5-5.0-5.5	0
	46-80	12.0-23.0-30.0	12.0-21.0-36.0	4.5-5.0-6.0	0
Bedford--------------	0-9	10.0-15.0-20.0	6.0-8.0-12.0	4.5-5.9-7.3	0
	9-24	11.0-16.0-25.0	9.0-14.0-22.0	3.5-5.2-6.0	0
	24-51	9.0-14.0-17.0	8.0-12.0-15.0	3.5-4.5-5.5	0
	51-80	21.0-34.0-48.0	18.0-31.0-45.0	3.5-5.1-5.5	0
Navilleton-----------	0-8	8.0-15.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-35	9.0-14.0-23.0	7.0-12.0-20.0	4.5-5.3-7.3	0
	35-65	20.0-35.0-47.0	18.0-33.0-45.0	4.5-5.0-5.5	0
	65-79	20.0-32.0-40.0	---	5.6-7.0-7.8	0
	79-83	---	---	---	---
CwaAQ:					
Cuba-----------------	0-10	10.0-16.0-25.0	5.0-10.0-15.0	4.5-5.9-7.3	0
	10-47	6.0-10.0-17.0	5.0-9.0-15.0	4.5-5.0-6.5	0
	47-60	5.0-9.0-17.0	4.0-8.0-15.0	4.5-5.0-5.5	0
CxgC3:					
Crider---------------	0-7	8.0-14.0-20.0	4.0-9.0-14.0	4.5-5.9-7.3	0
	7-30	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	30-80	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
CxgC3:					
Haggatt	0-5	10.0-14.0-22.0	5.0-9.0-13.0	5.1-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---
CxhC2:					
Crider	0-7	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	7-36	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	36-80	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
Haggatt	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
CxmC2:					
Crider	0-7	8.0-11.0-18.0	5.0-8.0-15.0	4.5-5.9-7.3	0
	7-43	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	43-75	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
	75-80	---	---	---	---
Haggatt	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
CxnC3:					
Crider	0-7	8.0-14.0-20.0	4.0-9.0-14.0	4.5-5.9-7.3	0
	7-30	12.0-15.0-18.0	9.0-12.0-15.0	4.5-5.3-7.3	0
	30-75	15.0-30.0-38.0	14.0-28.0-36.0	4.5-5.7-6.0	0
	75-80	---	---	---	---
Haggatt	0-5	10.0-14.0-22.0	5.0-9.0-13.0	5.1-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---
DbrG:					
Deam	0-3	10.0-16.0-22.0	7.0-9.0-11.0	3.5-4.3-6.5	0
	3-24	---	8.0-10.0-12.0	3.5-4.4-5.0	0
	24-36	---	8.0-10.0-13.0	4.5-4.6-5.5	0
	36-60	---	---	4.5-5.4-6.5	---
DdsAW:					
Dearborn	0-10	16.0-22.0-24.0	---	7.4-7.5-8.4	10-18-25
	10-16	11.0-16.0-21.0	---	7.4-7.7-8.4	10-18-30
	16-60	6.0-12.0-18.0	---	7.4-7.9-8.4	15-20-30
DfnA:					
Dubois	0-10	10.0-15.0-20.0	5.0-10.0-16.0	4.5-5.9-7.3	0
	10-17	6.0-10.0-14.0	4.0-8.0-11.0	4.5-5.0-6.5	0
	17-38	---	4.0-9.0-14.0	3.5-4.4-5.0	0
	38-82	---	4.0-8.0-12.0	3.5-5.0-5.5	0
	82-96	8.0-12.0-20.0	6.0-9.0-16.0	5.1-6.5-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
DtvC2:					
Deputy---------------	0-8	12.0-19.0-25.0	6.0-10.0-15.0	4.5-5.9-7.3	0
	8-27	8.0-14.0-18.0	5.0-10.0-15.0	4.5-4.9-6.5	0
	27-53	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.5-5.0	0
	53-77	---	---	3.5-4.5-5.0	---
	77-87	---	---	---	---
Trappist-------------	0-7	9.0-12.0-20.0	6.0-9.0-12.0	4.5-5.4-7.3	0
	7-24	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-5.5	0
	24-31	6.0-10.0-14.0	5.0-8.0-12.0	3.5-4.7-5.5	0
	31-41	---	---	---	---
EbpD2:					
Eden-----------------	0-5	20.0-27.0-42.0	---	5.6-6.9-7.3	0
	5-23	18.0-25.0-30.0	---	6.6-7.4-8.4	0-2-30
	23-60	---	---	7.4-7.9-8.4	---
EesA:					
Elkinsville----------	0-8	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	8-38	8.0-12.0-15.0	6.0-9.0-12.0	4.5-4.7-7.3	0
	38-75	5.0-8.0-14.0	4.0-7.0-12.0	4.5-4.7-5.5	0
	75-80	8.0-11.0-14.0	6.0-9.0-12.0	4.5-4.7-6.0	0
Millstone------------	0-12	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	12-59	5.0-8.0-12.0	4.0-7.0-10.0	4.5-4.7-6.0	0
	59-80	5.0-6.0-12.0	4.0-5.0-10.0	4.5-4.6-6.0	0
EesB:					
Elkinsville----------	0-8	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	8-34	8.0-12.0-15.0	6.0-9.0-12.0	4.5-4.7-7.3	0
	34-60	5.0-8.0-14.0	4.0-7.0-12.0	4.5-4.7-5.5	0
	60-80	8.0-11.0-14.0	6.0-9.0-12.0	4.5-4.7-6.0	0
Millstone------------	0-10	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	10-62	5.0-8.0-12.0	4.0-7.0-10.0	4.5-4.7-6.0	0
	62-80	5.0-6.0-12.0	4.0-5.0-10.0	4.5-4.6-6.0	0
EesC2:					
Elkinsville----------	0-7	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	7-30	8.0-12.0-15.0	6.0-9.0-12.0	4.5-4.7-7.3	0
	30-56	5.0-8.0-14.0	4.0-7.0-12.0	4.5-4.7-5.5	0
	56-80	8.0-11.0-14.0	6.0-9.0-12.0	4.5-4.7-6.0	0
Millstone------------	0-7	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	7-58	5.0-8.0-12.0	4.0-7.0-10.0	4.5-4.7-6.0	0
	58-80	5.0-6.0-12.0	4.0-5.0-10.0	4.5-4.6-6.0	0
EesD2:					
Elkinsville----------	0-7	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	7-30	8.0-12.0-15.0	6.0-9.0-12.0	4.5-4.7-7.3	0
	30-56	5.0-8.0-14.0	4.0-7.0-12.0	4.5-4.7-5.5	0
	56-80	8.0-11.0-14.0	6.0-9.0-12.0	4.5-4.7-6.0	0
Millstone------------	0-7	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.9-7.3	0
	7-58	5.0-8.0-12.0	4.0-7.0-10.0	4.5-4.7-6.0	0
	58-80	5.0-6.0-12.0	4.0-5.0-10.0	4.5-4.6-6.0	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
EesFQ:					
Elkinsville----------	0-5	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.4-7.3	0
	5-24	8.0-12.0-15.0	6.0-9.0-12.0	4.5-4.7-7.3	0
	24-50	5.0-8.0-14.0	4.0-7.0-12.0	4.5-4.7-5.5	0
	50-80	8.0-11.0-14.0	6.0-9.0-12.0	4.5-4.7-6.0	0
Millstone------------	0-6	8.0-12.0-20.0	5.0-8.0-11.0	4.5-5.4-7.3	0
	6-54	5.0-8.0-12.0	4.0-7.0-10.0	4.5-4.7-6.0	0
	54-80	5.0-6.0-12.0	4.0-5.0-10.0	4.5-4.6-6.0	0
EsaG:					
Eden-----------------	0-6	20.0-27.0-42.0	---	5.6-6.9-7.3	0
	6-11	20.0-29.0-38.0	---	6.6-7.0-7.3	0
	11-39	18.0-25.0-30.0	---	6.6-7.4-8.4	0-2-30
	39-60	---	---	7.4-7.9-8.4	---
GgbG:					
Gilwood--------------	0-6	5.0-9.0-15.0	4.0-8.0-12.0	4.5-5.5-6.5	0
	6-11	7.0-9.0-11.0	6.0-8.0-10.0	4.5-5.0-5.5	0
	11-22	7.0-9.0-11.0	6.0-8.0-10.0	3.5-4.6-5.0	0
	22-32	7.0-9.0-11.0	6.0-8.0-10.0	3.5-4.6-5.0	0
	32-60	---	---	---	---
Brownstown-----------	0-6	5.0-6.0-10.0	3.0-4.0-6.0	3.5-4.5-6.5	0
	6-18	3.0-6.0-8.0	2.0-4.0-6.0	3.5-4.5-5.5	0
	18-36	3.0-6.0-8.0	2.0-4.0-6.0	3.5-4.6-5.5	0
	36-60	---	---	---	---
GgfD:					
Gilwood--------------	0-6	6.0-10.0-15.0	4.0-8.0-12.0	4.5-5.1-6.5	0
	6-11	---	6.0-8.0-10.0	4.5-5.0-5.5	0
	11-22	---	6.0-8.0-10.0	3.5-4.6-5.0	0
	22-32	---	6.0-8.0-10.0	3.5-4.6-5.0	0
	32-42	---	---	---	---
Wrays----------------	0-6	8.0-14.0-20.0	3.0-5.0-8.0	4.5-4.9-7.3	0
	6-25	8.0-13.0-16.0	6.0-10.0-14.0	4.5-4.6-6.5	0
	25-34	---	12.0-15.0-18.0	3.5-4.4-5.0	0
	34-44	---	6.0-9.0-12.0	3.5-4.6-5.0	0
	44-54	---	---	---	---
GgfE2:					
Gilwood--------------	0-6	5.0-9.0-15.0	4.0-8.0-12.0	4.5-5.5-7.3	0
	6-11	7.0-9.0-11.0	6.0-8.0-10.0	4.5-5.0-5.5	0
	11-22	7.0-9.0-11.0	6.0-8.0-10.0	3.5-4.6-5.0	0
	22-32	7.0-9.0-11.0	6.0-8.0-10.0	3.5-4.6-5.0	0
	32-60	---	---	---	---
Wrays----------------	0-6	8.0-14.0-20.0	3.0-5.0-8.0	4.5-5.9-7.3	0
	6-25	8.0-13.0-16.0	6.0-10.0-14.0	4.5-4.6-6.5	0
	25-34	14.0-17.0-21.0	12.0-15.0-18.0	3.5-4.4-5.0	0
	34-44	7.0-11.0-14.0	6.0-9.0-12.0	3.5-4.6-5.0	0
	44-60	---	---	---	---
GmaG:					
Gnawbone-------------	0-7	7.0-10.0-15.0	4.0-8.0-12.0	3.5-4.3-5.0	0
	7-27	7.0-10.0-13.0	6.0-8.0-11.0	3.5-4.5-5.0	0
	27-39	7.0-9.0-12.0	6.0-8.0-10.0	3.5-4.5-5.0	0
	39-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
GmaG:					
Kurtz----------------	0-6	7.0-10.0-14.0	4.0-7.0-10.0	3.5-4.3-5.0	0
	6-36	10.0-11.0-14.0	8.0-9.0-12.0	3.5-4.5-5.0	0
	36-47	9.0-10.0-14.0	8.0-9.0-12.0	4.5-5.0-5.5	0
	47-60	---	---	---	---
GyaD2:					
Grayford-------------	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-16	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	16-45	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	45-52	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	52-60	---	---	---	---
GyaD3:					
Grayford-------------	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-12	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	12-42	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	42-49	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	49-60	---	---	---	---
GyaD5:					
Grayford-------------	0-2	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	2-24	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	24-45	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	45-60	---	---	---	---
GykD2:					
Grayford-------------	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-16	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	16-45	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	45-52	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	52-60	---	---	---	---
GykD3:					
Grayford-------------	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-12	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	12-42	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	42-49	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	49-60	---	---	---	---
HcaA:					
Hatfield-------------	0-7	8.0-14.0-22.0	5.0-9.0-15.0	4.5-5.9-7.3	0
	7-20	8.0-11.0-16.0	5.0-7.0-11.0	4.5-5.3-6.0	0
	20-36	10.0-14.0-17.0	8.0-12.0-15.0	4.5-4.9-5.5	0
	36-78	12.0-17.0-20.0	8.0-11.0-15.0	4.5-5.5-6.5	0
	78-83	10.0-15.0-20.0	7.0-12.0-15.0	5.1-6.9-7.8	0
HccB2:					
Haubstadt------------	0-7	9.0-12.0-22.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-32	8.0-13.0-17.0	7.0-11.0-15.0	4.5-5.5-6.5	0
	32-61	---	6.0-9.0-12.0	4.5-4.6-5.5	0
	61-80	14.0-17.0-20.0	10.0-13.0-16.0	4.5-5.0-7.3	0
HcdC2:					
Haubstadt------------	0-5	9.0-12.0-22.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	5-29	8.0-13.0-17.0	7.0-11.0-15.0	4.5-4.6-6.5	0
	29-58	---	6.0-9.0-12.0	4.5-4.6-5.5	0
	58-80	14.0-17.0-20.0	10.0-13.0-16.0	4.5-5.0-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
HcdC2:					
Shircliff	0-7	9.0-14.0-25.0	5.0-9.0-14.0	5.1-5.9-7.3	0
	7-13	10.0-15.0-20.0	8.0-12.0-16.0	4.5-5.6-6.5	0
	13-38	16.0-20.0-24.0	12.0-16.0-20.0	4.5-6.5-7.8	0-0-5
	38-49	10.0-14.0-18.0	---	6.6-7.3-7.8	0-0-25
	49-60	10.0-14.0-18.0	---	7.9-7.9-8.4	10-15-45
HceC3:					
Haubstadt	0-6	10.0-14.0-25.0	6.0-9.0-14.0	4.5-5.9-7.3	0
	6-17	8.0-13.0-17.0	7.0-11.0-15.0	4.5-4.6-6.5	0
	17-47	---	6.0-9.0-12.0	4.5-4.6-5.5	0
	47-80	14.0-17.0-20.0	10.0-13.0-16.0	4.5-5.0-7.3	0
Shircliff	0-6	12.0-16.0-25.0	8.0-13.0-18.0	5.1-5.9-7.3	0
	6-38	16.0-20.0-24.0	12.0-16.0-20.0	4.5-6.5-7.8	0-0-5
	38-45	10.0-14.0-18.0	---	6.6-7.3-7.8	0-0-25
	45-60	10.0-14.0-18.0	---	7.9-7.9-8.4	10-15-45
HcgAH:					
Haymond	0-10	4.0-10.0-15.0	---	5.6-6.2-7.3	0
	10-44	10.0-13.0-16.0	---	5.6-6.2-7.3	0
	44-60	3.0-9.0-16.0	---	6.1-6.6-7.8	0
HcgAV:					
Haymond	0-10	4.0-10.0-15.0	---	5.6-6.2-7.3	0
	10-44	10.0-13.0-16.0	---	5.6-6.2-7.3	0
	44-60	3.0-9.0-16.0	---	6.1-6.6-7.8	0
HcgAW:					
Haymond	0-9	4.0-10.0-15.0	---	5.6-6.4-7.3	0
	9-44	10.0-13.0-16.0	---	5.6-6.4-7.3	0
	44-60	3.0-9.0-16.0	---	6.1-6.6-7.3	0
HerE:					
Hickory	0-11	7.0-13.0-19.0	5.0-10.0-16.0	4.5-5.5-7.3	0
	11-39	10.0-16.0-22.0	8.0-14.0-20.0	4.5-5.3-6.0	0
	39-45	9.0-14.0-19.0	6.0-11.0-16.0	5.6-6.5-7.8	0-0-15
	45-60	5.0-10.0-15.0	---	7.4-7.8-8.4	5-20-25
Bonnell	0-6	10.0-14.0-18.0	7.0-11.0-15.0	4.5-5.5-7.3	0
	6-9	---	9.0-12.0-16.0	4.5-5.3-5.5	0
	9-44	---	15.0-20.0-25.0	4.5-5.0-5.5	0
	44-70	12.0-15.0-18.0	9.0-12.0-15.0	5.6-6.5-7.8	0-0-10
	70-80	8.0-13.0-18.0	---	7.4-7.6-8.4	10-18-25
HtwD2:					
Haggatt	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
Caneyville	0-6	8.0-13.0-20.0	5.0-7.0-12.0	5.1-5.9-7.3	0
	6-10	10.0-15.0-20.0	7.0-11.0-15.0	4.5-5.6-7.3	0
	10-30	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	30-60	---	---	---	---
HtzD3:					
Haggatt	0-5	10.0-14.0-22.0	5.0-9.0-13.0	4.5-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
HtzD3:					
Caneyville-----------	0-5	10.0-14.0-20.0	5.0-9.0-15.0	5.1-5.9-7.3	0
	5-24	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	24-60	---	---	---	---
HufAK:					
Huntington-----------	0-12	15.0-22.0-30.0	---	5.6-6.7-7.3	0
	12-42	7.0-13.0-18.0	---	5.6-6.7-7.3	0
	42-80	5.0-12.0-17.0	---	5.6-6.7-7.8	0
HuhD2:					
Haggatt--------------	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
Caneyville-----------	0-6	8.0-13.0-20.0	5.0-7.0-12.0	5.1-5.9-7.3	0
	6-10	10.0-15.0-20.0	7.0-11.0-15.0	4.5-5.6-7.3	0
	10-36	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	36-60	---	---	---	---
HujD3:					
Haggatt--------------	0-5	10.0-14.0-22.0	5.0-9.0-13.0	4.5-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---
Caneyville-----------	0-5	10.0-14.0-20.0	5.0-9.0-15.0	5.1-5.9-7.3	0
	5-24	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	24-60	---	---	---	---
JaeB2:					
Jennings-------------	0-9	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	9-27	8.0-12.0-15.0	5.0-9.0-12.0	3.5-5.0-6.5	0
	27-38	---	5.0-7.0-12.0	3.5-4.5-5.0	0
	38-73	---	8.0-12.0-22.0	3.5-4.3-5.0	0
	73-77	6.0-12.0-19.0	5.0-10.0-16.0	3.5-4.3-5.0	0
	77-87	---	---	---	---
JafC2:					
Jennings-------------	0-9	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	9-27	8.0-12.0-15.0	5.0-9.0-12.0	3.5-5.0-6.5	0
	27-38	---	5.0-7.0-12.0	3.5-4.5-5.0	0
	38-73	---	8.0-12.0-22.0	3.5-4.3-5.0	0
	73-77	6.0-12.0-19.0	5.0-10.0-16.0	3.5-4.3-5.0	0
	77-87	---	---	---	---
Blocher, hard bedrock substratum----------	0-9	9.0-11.0-20.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	9-28	10.0-12.0-14.0	8.0-10.0-12.0	4.5-5.5-6.5	0
	28-58	---	10.0-15.0-22.0	4.5-4.8-5.5	0
	58-75	10.0-14.0-20.0	8.0-12.0-18.0	4.5-5.2-6.5	0
	75-85	---	---	---	---
JafC3:					
Jennings-------------	0-3	7.0-10.0-20.0	4.0-7.0-12.0	4.5-5.9-7.3	0
	3-17	8.0-12.0-15.0	5.0-9.0-12.0	3.5-5.0-6.5	0
	17-30	---	5.0-7.0-12.0	3.5-4.5-5.0	0
	30-69	---	8.0-12.0-22.0	3.5-4.3-5.0	0
	69-75	6.0-12.0-19.0	5.0-10.0-16.0	3.5-4.3-5.0	0
	75-85	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
JafC3:					
Blocher, hard bedrock substratum----------	0-3	9.0-13.0-22.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	3-10	10.0-12.0-14.0	8.0-10.0-12.0	4.5-5.0-6.5	0
	10-43	---	10.0-15.0-22.0	4.5-4.8-5.5	0
	43-70	10.0-14.0-20.0	8.0-12.0-18.0	4.5-5.2-6.5	0
	70-80	---	---	---	---
KxkC2:					
Knobcreek------------	0-7	10.0-14.0-22.0	5.0-9.0-15.0	4.5-5.9-7.3	0
	7-18	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	18-63	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	63-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Navilleton-----------	0-8	8.0-15.0-20.0	4.0-8.0-12.0	4.5-6.2-7.3	0
	8-35	9.0-14.0-23.0	7.0-12.0-20.0	4.5-5.3-7.3	0
	35-43	20.0-35.0-47.0	18.0-33.0-45.0	4.5-5.0-5.5	0
	43-72	20.0-32.0-40.0	---	5.6-7.0-7.8	0
	72-82	---	---	---	---
KxlC3:					
Knobcreek------------	0-6	10.0-16.0-24.0	5.0-11.0-17.0	4.5-5.9-7.3	0
	6-13	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	13-60	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	60-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Haggatt--------------	0-5	10.0-14.0-22.0	5.0-9.0-13.0	4.5-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---
Caneyville-----------	0-5	10.0-14.0-20.0	5.0-9.0-15.0	5.1-5.9-7.3	0
	5-24	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	24-60	---	---	---	---
KxlE3:					
Knobcreek------------	0-6	10.0-16.0-24.0	5.0-11.0-17.0	4.5-5.9-7.3	0
	6-13	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	13-60	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	60-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Haggatt--------------	0-5	10.0-14.0-22.0	5.0-9.0-13.0	4.5-5.9-7.3	0
	5-11	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	11-42	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	42-60	---	---	---	---
Caneyville-----------	0-5	10.0-14.0-20.0	5.0-9.0-15.0	5.1-5.9-7.3	0
	5-24	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	24-60	---	---	---	---
KxmE2:					
Knobcreek------------	0-7	10.0-14.0-22.0	5.0-9.0-15.0	4.5-5.9-7.3	0
	7-18	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	18-63	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	63-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Haggatt--------------	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
KxmE2:					
Caneyville	0-6	8.0-13.0-20.0	5.0-7.0-12.0	5.1-5.9-7.3	0
	6-10	10.0-15.0-20.0	7.0-11.0-15.0	4.5-5.6-7.3	0
	10-36	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	36-60	---	---	---	---
KxoC2:					
Knobcreek	0-7	10.0-14.0-22.0	5.0-9.0-15.0	4.5-5.9-7.3	0
	7-18	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	18-63	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	63-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Navilleton	0-8	8.0-15.0-20.0	4.0-8.0-12.0	4.5-6.2-7.3	0
	8-35	9.0-14.0-20.0	7.0-12.0-20.0	4.5-5.3-7.3	0
	35-43	20.0-35.0-47.0	18.0-33.0-45.0	4.5-5.0-5.5	0
	43-72	20.0-32.0-40.0	18.0-30.0-38.0	5.6-7.0-7.8	0
	72-82	---	---	---	---
Haggatt	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
KxpD2:					
Knobcreek	0-7	10.0-14.0-22.0	5.0-9.0-15.0	4.5-5.9-7.3	0
	7-18	11.0-16.0-24.0	8.0-15.0-20.0	4.5-4.8-7.3	0
	18-63	22.0-29.0-40.0	20.0-28.0-38.0	4.5-5.0-5.5	0
	63-80	14.0-18.0-24.0	---	5.6-6.6-7.3	0
Haggatt	0-5	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	5-16	12.0-15.0-20.0	9.0-12.0-17.0	4.5-5.4-7.3	0
	16-44	17.0-28.0-48.0	17.0-28.0-45.0	4.5-5.1-7.3	0
	44-60	---	---	---	---
Caneyville	0-6	8.0-13.0-20.0	5.0-7.0-12.0	5.1-5.9-7.3	0
	6-10	10.0-15.0-20.0	7.0-11.0-15.0	4.5-5.6-7.3	0
	10-36	21.0-29.0-37.0	18.0-26.0-35.0	5.1-5.4-7.8	0-0-5
	36-60	---	---	---	---
LpoAK:					
Lindside	0-10	10.0-16.0-24.0	---	5.6-6.1-7.3	0
	10-42	10.0-14.0-22.0	---	5.6-6.0-7.3	0
	42-80	10.0-12.0-22.0	---	5.6-6.5-7.3	0
McgC2:					
Markland	0-6	14.0-18.0-22.0	12.0-15.0-18.0	5.1-6.2-7.3	0
	6-25	14.0-18.0-24.0	9.0-14.0-16.0	4.5-5.9-7.8	0-0-5
	25-42	12.0-17.0-20.0	---	7.4-7.9-8.4	5-15-25
	42-80	8.0-13.0-16.0	---	7.4-8.1-8.4	20-30-45
McnGQ:					
Markland	0-4	14.0-20.0-24.0	12.0-15.0-18.0	5.1-6.1-7.3	0
	4-28	14.0-18.0-24.0	9.0-14.0-16.0	4.5-5.9-7.8	0-0-5
	28-59	12.0-17.0-20.0	---	7.4-7.9-8.4	5-15-25
	59-80	8.0-13.0-16.0	---	7.4-8.1-8.4	20-30-45
McpC3:					
Markland	0-4	14.0-20.0-24.0	12.0-15.0-18.0	5.1-6.1-7.3	0
	4-25	14.0-18.0-24.0	9.0-14.0-16.0	4.5-5.9-7.8	0-0-5
	25-42	12.0-17.0-20.0	---	7.4-7.9-8.4	5-15-25
	42-80	8.0-13.0-16.0	---	7.4-8.1-8.4	20-30-45

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
McuDQ:					
Markland	0-4	14.0-20.0-24.0	12.0-15.0-18.0	5.1-6.1-7.3	0
	4-18	14.0-18.0-24.0	9.0-14.0-16.0	4.5-5.9-7.8	0-0-5
	18-40	12.0-17.0-20.0	---	7.4-7.9-8.4	5-15-25
	40-80	8.0-13.0-16.0	---	7.4-8.1-8.4	20-30-45
MdqDQ:					
Markland	0-6	14.0-18.0-22.0	12.0-15.0-18.0	5.1-6.2-7.3	0
	6-25	14.0-18.0-24.0	9.0-14.0-16.0	4.5-5.9-7.8	0-0-5
	25-42	12.0-17.0-20.0	---	7.4-7.9-8.4	5-15-25
	42-80	8.0-13.0-16.0	---	7.4-8.1-8.4	20-30-45
MhuA:					
McGary	0-11	8.0-12.0-20.0	---	5.6-6.6-7.3	0
	11-42	12.0-20.0-24.0	10.0-16.0-20.0	4.5-6.6-7.8	0-0-15
	42-50	16.0-19.0-24.0	---	7.4-7.9-8.4	0-15-30
	50-60	10.0-15.0-18.0	---	7.4-8.0-8.4	10-30-40
MhyA:					
Medora	0-9	8.0-13.0-18.0	6.0-9.0-12.0	4.5-5.9-7.3	0
	9-28	9.0-11.0-14.0	7.0-9.0-12.0	4.5-5.0-6.5	0
	28-48	---	5.0-8.0-11.0	4.5-4.8-5.0	0
	48-80	---	10.0-14.0-18.0	4.5-5.0-5.5	0
MhyB2:					
Medora	0-8	8.0-13.0-22.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	8-21	9.0-11.0-14.0	7.0-9.0-12.0	4.5-5.0-6.5	0
	21-45	---	5.0-8.0-11.0	4.5-4.8-5.0	0
	45-80	---	10.0-13.0-18.0	4.5-5.0-5.5	0
MhyC2:					
Medora	0-8	8.0-13.0-22.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	8-21	9.0-11.0-14.0	7.0-9.0-12.0	4.5-5.0-6.5	0
	21-45	---	5.0-8.0-11.0	4.5-4.8-5.0	0
	45-80	---	10.0-13.0-18.0	4.5-5.0-5.5	0
MhyC3:					
Medora	0-7	9.0-14.0-24.0	7.0-10.0-14.0	4.5-5.9-7.3	0
	7-16	9.0-11.0-14.0	7.0-9.0-12.0	4.5-5.0-6.5	0
	16-35	---	5.0-8.0-11.0	4.5-4.8-5.0	0
	35-80	---	10.0-13.0-18.0	4.5-5.0-5.5	0
MsvA:					
Montgomery	0-15	20.0-28.0-36.0	---	6.1-6.7-7.3	0
	15-24	20.0-25.0-35.0	---	6.1-7.0-7.8	0-0-5
	24-48	17.0-22.0-35.0	---	7.4-7.9-8.4	5-15-25
	48-60	15.0-22.0-30.0	---	7.4-7.9-8.4	20-28-35
NaaA:					
Nabb	0-10	7.0-11.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	10-18	7.0-10.0-13.0	4.0-6.0-10.0	4.5-5.3-6.5	0
	18-35	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.8-5.5	0
	35-76	8.0-11.0-14.0	6.0-9.0-12.0	3.5-4.6-5.5	0
	76-80	15.0-17.0-22.0	12.0-14.0-19.0	5.1-5.6-7.3	0
NaaB2:					
Nabb	0-7	7.0-11.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	7-13	7.0-10.0-13.0	4.0-7.0-12.0	4.5-5.3-6.5	0
	13-33	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.8-5.5	0
	33-71	8.0-11.0-14.0	6.0-9.0-12.0	3.5-4.6-5.5	0
	71-80	15.0-17.0-22.0	12.0-14.0-19.0	5.1-5.6-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
NbhAK:					
Newark---------------	0-7	10.0-16.0-22.0	---	5.6-6.5-7.3	0
	7-66	10.0-15.0-20.0	---	5.6-6.6-7.3	0
	66-80	8.0-14.0-22.0	---	5.6-6.6-7.8	0
OfbAW:					
Oldenburg------------	0-9	4.0-8.0-12.0	3.0-7.0-10.0	5.1-6.5-7.3	0
	9-25	4.0-7.0-12.0	3.0-6.0-10.0	5.1-6.5-7.3	0
	25-60	2.0-5.0-10.0	---	5.6-6.5-7.3	0
PcrB2:					
Pekin----------------	0-10	6.0-11.0-18.0	4.0-9.0-14.0	4.5-5.9-7.3	0
	10-24	7.0-11.0-15.0	6.0-9.0-13.0	4.5-4.8-7.3	0
	24-45	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.3-5.5	0
	45-80	6.0-12.0-18.0	5.0-10.0-15.0	4.5-4.9-7.3	0
PcrC2:					
Pekin----------------	0-8	6.0-11.0-18.0	4.0-9.0-14.0	4.5-5.9-7.3	0
	8-28	7.0-11.0-15.0	6.0-9.0-13.0	4.5-4.8-7.3	0
	28-57	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.3-5.5	0
	57-80	6.0-12.0-18.0	5.0-10.0-15.0	4.5-4.9-7.3	0
PcrC3:					
Pekin----------------	0-6	6.0-11.0-18.0	4.0-9.0-14.0	4.5-5.9-7.3	0
	6-18	7.0-11.0-15.0	6.0-9.0-13.0	4.5-4.8-7.3	0
	18-42	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.3-5.5	0
	42-80	6.0-12.0-18.0	5.0-10.0-15.0	4.5-4.9-7.3	0
PhaA:					
Peoga----------------	0-8	8.0-12.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-19	6.0-9.0-11.0	4.0-6.0-8.0	3.5-4.7-6.5	0
	19-36	10.0-16.0-20.0	7.0-12.0-15.0	3.5-4.7-5.5	0
	36-76	12.0-15.0-20.0	9.0-12.0-15.0	3.5-5.0-6.0	0
	76-80	12.0-16.0-22.0	10.0-13.0-18.0	5.1-5.6-7.3	0
Pml.					
Pits, quarry					
Ppu.					
Pits, sand and gravel					
RblD3:					
Rarden---------------	0-4	15.0-20.0-25.0	11.0-14.0-17.0	3.5-5.8-7.3	0
	4-24	15.0-21.0-30.0	13.0-18.0-24.0	3.5-4.4-6.5	0
	24-32	---	9.0-11.0-14.0	3.5-4.4-5.5	0
	32-60	---	---	4.5-5.4-6.5	---
RbmD5:					
Rarden---------------	0-20	15.0-20.0-25.0	12.0-17.0-22.0	3.5-4.4-5.5	0
	20-26	---	9.0-11.0-14.0	3.5-4.4-5.5	0
	26-60	---	---	4.5-5.4-6.5	---
RptG:					
Rohan----------------	0-4	9.0-14.0-20.0	5.0-9.0-12.0	4.5-5.2-6.0	0
	4-16	---	3.0-9.0-14.0	3.5-4.6-5.5	0
	16-40	---	---	---	---
Jessietown-----------	0-5	---	4.0-9.0-12.0	3.5-4.8-5.5	0
	5-23	---	5.0-9.0-16.0	3.5-4.5-5.5	0
	23-30	---	5.0-11.0-18.0	3.5-4.5-5.5	0
	30-40	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
RtcA:					
Ryker	0-9	4.0-11.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	9-12	7.0-10.0-15.0	6.0-8.0-12.0	4.5-5.5-7.3	0
	12-38	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	38-67	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	67-80	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
RtcB2:					
Ryker	0-6	4.0-12.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	6-10	7.0-10.0-15.0	6.0-8.0-12.0	4.5-5.5-7.3	0
	10-34	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	34-63	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	63-80	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
RzrB2:					
Ryker	0-6	4.0-12.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	6-10	7.0-10.0-15.0	6.0-8.0-12.0	4.5-5.5-7.3	0
	10-34	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	34-63	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	63-80	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
RztC2:					
Ryker	0-8	9.0-12.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-32	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	32-58	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	58-80	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
Grayford	0-8	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	8-18	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	18-43	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	43-50	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	50-60	---	---	---	---
RztC3:					
Ryker	0-7	9.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	7-25	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	25-54	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	54-80	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
Grayford	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-12	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	12-42	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	42-52	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	52-60	---	---	---	---
RzvC2:					
Ryker	0-8	9.0-12.0-22.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-32	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	32-58	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	58-78	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
	78-80	---	---	---	---
Grayford	0-8	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	8-18	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	18-43	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	43-50	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	50-60	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
RzvC3:					
Ryker----------------	0-7	9.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	7-25	10.0-13.0-16.0	8.0-11.0-14.0	4.5-5.2-7.3	0
	25-54	6.0-14.0-20.0	5.0-12.0-18.0	4.5-5.0-5.5	0
	54-78	13.0-29.0-45.0	11.0-25.0-40.0	4.5-5.0-7.3	0
	78-80	---	---	---	---
Grayford-------------	0-7	9.0-12.0-20.0	5.0-8.0-12.0	4.5-5.9-7.3	0
	7-12	8.0-12.0-17.0	7.0-10.0-14.0	4.5-5.5-7.3	0
	12-42	7.0-12.0-17.0	6.0-9.0-13.0	4.5-5.0-5.5	0
	42-52	14.0-24.0-35.0	12.0-22.0-33.0	5.1-5.5-7.3	0
	52-60	---	---	---	---
SceB2:					
Scottsburg-----------	0-8	9.0-14.0-22.0	4.0-5.0-12.0	4.5-5.9-7.3	0
	8-31	6.0-9.0-14.0	5.0-8.0-12.0	4.5-4.8-6.5	0
	31-53	10.0-12.0-14.0	8.0-10.0-12.0	3.5-4.4-5.0	0
	53-61	12.0-14.0-18.0	10.0-12.0-15.0	3.5-4.3-5.0	0
	61-67	---	---	3.5-4.5-5.0	---
	67-80	---	---	---	---
SfyB:					
Shircliff------------	0-8	9.0-12.0-20.0	4.0-7.0-12.0	5.1-5.9-7.3	0
	8-19	10.0-13.0-17.0	6.0-9.0-14.0	4.5-5.0-6.0	0
	19-43	16.0-20.0-24.0	12.0-16.0-20.0	4.5-5.5-7.8	0-0-5
	43-80	10.0-14.0-18.0	---	7.8-8.1-8.4	10-25-45
SoaB:					
Spickert-------------	0-7	8.0-13.0-20.0	5.0-8.0-12.0	3.5-5.4-7.3	0
	7-31	6.0-12.0-14.0	4.0-9.0-12.0	3.5-4.9-6.0	0
	31-58	9.0-13.0-18.0	8.0-12.0-16.0	3.5-4.7-5.0	0
	58-64	9.0-13.0-20.0	8.0-12.0-18.0	3.5-4.4-5.0	0
	64-80	---	---	---	---
SodB:					
Spickert-------------	0-10	8.0-13.0-20.0	5.0-8.0-12.0	3.5-5.4-7.3	0
	10-34	6.0-12.0-14.0	4.0-9.0-12.0	3.5-4.9-6.0	0
	34-65	9.0-13.0-18.0	8.0-12.0-16.0	3.5-4.7-5.0	0
	65-72	9.0-13.0-20.0	8.0-12.0-18.0	3.5-4.4-5.0	0
	72-82	---	---	---	---
SolC2:					
Spickert-------------	0-7	8.0-13.0-20.0	5.0-8.0-12.0	3.5-5.9-7.3	0
	7-31	6.0-12.0-14.0	4.0-9.0-12.0	3.5-4.9-6.0	0
	31-58	9.0-13.0-18.0	8.0-12.0-16.0	3.5-4.7-5.0	0
	58-64	9.0-13.0-20.0	8.0-12.0-18.0	3.5-4.4-5.0	0
	64-80	---	---	---	---
Wrays----------------	0-7	8.0-14.0-20.0	3.0-5.0-8.0	4.5-5.9-7.3	0
	7-30	6.0-13.0-16.0	6.0-10.0-14.0	4.5-4.8-6.5	0
	30-39	14.0-17.0-21.0	12.0-15.0-18.0	3.5-4.4-5.0	0
	39-49	7.0-11.0-14.0	6.0-9.0-12.0	3.5-4.6-5.0	0
	49-60	---	---	---	---
StaAQ:					
Steff----------------	0-11	8.0-13.0-20.0	5.0-10.0-15.0	4.5-5.9-7.3	0
	11-41	6.0-9.0-17.0	5.0-7.0-15.0	4.5-5.0-6.5	0
	41-60	7.0-9.0-15.0	5.0-8.0-15.0	4.5-5.0-5.5	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
StdAQ:					
Stendal	0-8	8.0-14.0-20.0	5.0-10.0-15.0	4.5-5.9-7.3	0
	8-40	6.0-12.0-17.0	5.0-10.0-15.0	4.5-5.0-6.5	0
	40-60	6.0-12.0-17.0	5.0-10.0-15.0	4.5-5.1-5.5	0
StdAW:					
Stendal	0-8	8.0-14.0-20.0	5.0-10.0-15.0	4.5-5.9-7.3	0
	8-40	6.0-12.0-17.0	5.0-10.0-15.0	4.5-5.0-6.5	0
	40-60	6.0-12.0-17.0	5.0-10.0-15.0	4.5-5.1-5.5	0
ThaC2:					
Trappist	0-7	9.0-12.0-20.0	6.0-9.0-12.0	4.5-5.4-7.3	0
	7-24	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-6.5	0
	24-31	---	5.0-8.0-12.0	3.5-4.7-5.5	0
	31-41	---	---	---	---
ThbC3:					
Trappist	0-6	13.0-17.0-24.0	9.0-12.0-16.0	4.5-5.9-7.3	0
	6-21	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-6.5	0
	21-24	6.0-10.0-14.0	5.0-8.0-12.0	3.5-4.7-5.5	0
	24-40	---	---	---	---
ThbD5:					
Trappist	0-3	13.0-17.0-24.0	9.0-12.0-16.0	4.5-4.5-6.0	0
	3-20	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-5.5	0
	20-30	---	---	3.5-4.5-5.0	---
	30-40	---	---	---	---
ThcD3:					
Trappist	0-4	13.0-17.0-24.0	9.0-12.0-16.0	4.5-5.4-7.3	0
	4-21	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-6.5	0
	21-27	---	5.0-8.0-12.0	3.5-4.7-5.5	0
	27-40	---	---	---	---
Rohan	0-3	9.0-14.0-22.0	6.0-11.0-16.0	4.5-5.2-7.3	0
	3-12	4.0-7.0-16.0	3.0-6.0-14.0	3.5-4.6-6.5	0
	12-40	---	---	---	---
ThdD:					
Trappist	0-6	9.0-12.0-20.0	6.0-9.0-12.0	4.5-4.8-7.3	0
	6-30	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-6.5	0
	30-35	---	5.0-8.0-12.0	3.5-4.7-5.5	0
	35-45	---	---	---	---
Rohan	0-3	9.0-14.0-22.0	5.0-9.0-12.0	4.5-5.2-7.3	0
	3-16	4.0-7.0-16.0	3.0-6.0-14.0	3.5-4.6-6.5	0
	16-40	---	---	---	---
TsaC3:					
Trappist	0-6	13.0-17.0-24.0	9.0-12.0-16.0	4.5-5.9-7.3	0
	6-21	11.0-14.0-17.0	9.0-12.0-15.0	3.5-4.6-5.5	0
	21-24	6.0-10.0-14.0	5.0-8.0-12.0	3.5-4.7-5.5	0
	24-40	---	---	---	---
Deputy	0-2	12.0-19.0-25.0	6.0-12.0-15.0	4.5-5.9-7.3	0
	2-20	8.0-14.0-18.0	5.0-10.0-15.0	4.5-4.9-6.5	0
	20-43	10.0-14.0-19.0	8.0-12.0-16.0	3.5-4.5-5.0	0
	43-60	---	---	3.5-4.5-5.0	---
	60-80	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
Uaa.					
Udorthents, cut and filled					
UaoAK:					
Udifluvents, cut and filled.					
Urban land.					
UedA:					
Urban land.					
Aquents, clayey substratum.					
UndAY:					
Urban land.					
Udifluvents.					
UngB:					
Urban land.					
Udarents, fragipan substratum.					
UnkB:					
Urban land.					
Udarents, silty substratum.					
UnpA:					
Urban land.					
Udarents, loamy substratum.					
UnsB:					
Urban land.					
Udarents, clayey substratum.					
W.					
Water					
WaaAV:					
Wakeland-------------	0-7	4.0-9.0-12.0	---	5.6-6.4-7.3	0
	7-29	4.0-9.0-12.0	---	5.6-6.4-7.3	0
	29-60	4.0-9.0-12.0	---	5.6-6.4-7.3	0
WaaAW:					
Wakeland-------------	0-7	4.0-9.0-12.0	---	5.6-6.4-7.3	0
	7-29	4.0-9.0-12.0	---	5.6-6.4-7.3	0
	29-60	4.0-9.0-12.0	---	5.6-6.4-7.3	0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	meq/100 g	pH	Pct
WedB2:					
Weddel	0-8	8.0-12.0-20.0	4.0-8.0-12.0	4.5-5.9-7.3	0
	8-26	12.0-14.0-17.0	10.0-12.0-15.0	4.5-5.0-7.3	0
	26-39	---	10.0-12.0-15.0	4.5-4.7-5.0	0
	39-66	---	15.0-18.0-20.0	4.5-4.8-5.5	0
	66-75	17.0-20.0-22.0	15.0-18.0-20.0	4.5-4.8-6.0	0
	75-80	---	---	5.1-5.4-6.0	---
WhcD:					
Wellrock	0-4	9.0-14.0-20.0	6.0-8.0-12.0	4.5-4.7-7.3	0
	4-8	5.0-8.0-10.0	4.0-6.0-8.0	3.5-4.3-6.5	0
	8-28	---	6.0-10.0-14.0	3.5-4.5-5.0	0
	28-36	---	6.0-12.0-18.0	3.5-4.4-5.0	0
	36-52	---	6.0-12.0-18.0	3.5-4.7-5.0	0
	52-60	---	---	---	---
Gnawbone	0-7	9.0-13.0-20.0	4.0-8.0-12.0	3.5-4.3-7.3	0
	7-35	7.0-10.0-13.0	6.0-8.0-10.0	3.5-4.5-6.5	0
	35-39	---	6.0-8.0-10.0	3.5-4.5-5.0	0
	39-60	---	---	---	---
WnmA:					
Whitcomb	0-9	8.0-14.0-20.0	6.0-8.0-12.0	4.5-5.9-7.3	0
	9-15	7.0-9.0-14.0	6.0-8.0-12.0	3.5-4.4-6.5	0
	15-30	---	7.0-11.0-15.0	3.5-4.3-5.0	0
	30-48	---	12.0-14.0-17.0	3.5-4.1-5.0	0
	48-56	---	12.0-14.0-17.0	3.5-4.0-5.0	0
	56-61	---	10.0-12.0-15.0	3.5-4.0-5.0	0
	61-80	---	---	---	---
WokAV:					
Wilbur	0-7	4.0-10.0-16.0	---	5.6-6.4-7.3	0
	7-32	4.0-10.0-15.0	---	5.6-6.4-7.3	0
	32-60	4.0-10.0-16.0	---	5.6-6.4-7.3	0
WokAW:					
Wilbur	0-7	4.0-10.0-16.0	---	5.6-6.4-7.3	0
	7-32	4.0-10.0-15.0	---	5.6-6.4-7.3	0
	32-60	4.0-10.0-16.0	---	5.6-6.4-7.3	0
WprAW:					
Wirt	0-8	6.0-11.0-15.0	---	5.6-6.5-7.3	0
	8-38	5.0-10.0-13.0	---	5.6-6.5-7.3	0
	38-60	3.0-8.0-12.0	---	5.6-6.5-7.3	0

Table 20.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
AddA:										
Avonburg	C	Medium								
			January	0.5-2.0	3.3-5.0	---	---	None	---	None
			February	0.5-2.0	3.3-5.0	---	---	None	---	None
			March	0.5-2.0	3.3-5.0	---	---	None	---	None
			April	0.5-2.0	3.3-5.0	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	3.3-5.0	---	---	None	---	None
			December	0.5-2.0	3.3-5.0	---	---	None	---	None
AddB2:										
Avonburg	C	Medium								
			January	0.5-2.0	3.3-5.0	---	---	None	---	None
			February	0.5-2.0	3.3-5.0	---	---	None	---	None
			March	0.5-2.0	3.3-5.0	---	---	None	---	None
			April	0.5-2.0	3.3-5.0	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	3.3-5.0	---	---	None	---	None
			December	0.5-2.0	3.3-5.0	---	---	None	---	None
BbhA:										
Bartle	C	Medium								
			January	0.5-2.0	2.0-3.5	---	---	None	---	None
			February	0.5-2.0	2.0-3.5	---	---	None	---	None
			March	0.5-2.0	2.0-3.5	---	---	None	---	None
			April	0.5-2.0	2.0-3.5	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	2.5-3.5	---	---	None	---	None
			December	0.5-2.0	2.0-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
BcrAQ:										
Beanblossom---------------	B	Low								
			January	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			February	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			March	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			April	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			May	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			June	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			July	4.0-5.0	4.5-5.0	---	---	None	Very brief	Very rare
			August	4.0-5.0	4.5-5.0	---	---	None	Very brief	Very rare
			September	---	---	---	---	None	Very brief	Very rare
			October	---	---	---	---	None	Very brief	Very rare
			November	3.3-5.0	4.0-5.0	---	---	None	Very brief	Very rare
			December	3.3-5.0	4.0-5.0	---	---	None	Very brief	Very rare
BcrAW:										
Beanblossom---------------	B	Low								
			January	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			February	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			March	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			April	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			May	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			June	3.3-5.0	4.0-5.0	---	---	None	Very brief	Occasional
			July	4.0-5.0	4.5-5.0	---	---	None	Very brief	Rare
			August	4.0-5.0	4.5-5.0	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
			December	3.3-5.0	4.0-5.0	---	---	None	Very brief	Rare
BdoA:										
Bedford-------------------	C	Medium								
			January	1.5-2.5	1.7-3.1	---	---	None	---	None
			February	1.5-2.5	1.7-3.1	---	---	None	---	None
			March	1.5-2.5	1.7-3.1	---	---	None	---	None
			April	1.5-2.5	2.0-3.1	---	---	None	---	None
			May	2.0-2.5	2.5-3.1	---	---	None	---	None
			November	2.0-2.5	2.5-3.1	---	---	None	---	None
			December	1.5-2.5	2.0-3.1	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
BdoB:										
Bedford-------------------	C	Medium								
			January	1.5-2.5	1.7-3.1	---	---	None	---	None
			February	1.5-2.5	1.7-3.1	---	---	None	---	None
			March	1.5-2.5	1.7-3.1	---	---	None	---	None
			April	1.5-2.5	2.0-3.1	---	---	None	---	None
			May	2.0-2.5	2.5-3.1	---	---	None	---	None
			November	2.0-2.5	2.5-3.1	---	---	None	---	None
			December	1.5-2.5	2.0-3.1	---	---	None	---	None
BfbC2:										
Blocher, soft bedrock substratum---------------	C	High								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
Weddel--------------------	C	High								
			January	1.5-3.0	2.0-3.5	---	---	None	---	None
			February	1.5-3.0	2.0-3.5	---	---	None	---	None
			March	1.5-3.0	2.0-3.5	---	---	None	---	None
			April	1.5-3.0	2.0-3.5	---	---	None	---	None
			May	2.0-2.5	2.5-3.5	---	---	None	---	None
			November	2.0-2.5	2.5-3.5	---	---	None	---	None
			December	1.5-3.0	2.0-3.5	---	---	None	---	None
BfcC3:										
Blocher, soft bedrock substratum---------------	C	Very high								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
Weddel--------------------	C	Very high								
			January	1.0-2.0	2.0-2.5	---	---	None	---	None
			February	1.0-2.0	2.0-2.5	---	---	None	---	None
			March	1.0-2.0	2.0-2.5	---	---	None	---	None
			April	1.0-2.0	2.0-2.5	---	---	None	---	None
			May	1.5-2.5	2.0-3.0	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.0-2.0	2.0-2.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
BnyD3:										
Bonnell	C	High								
			Jan-Dec	---	---	---	---	None	---	None
BobE5:										
Bonnell	C	Very high								
			Jan-Dec	---	---	---	---	None	---	None
Hickory	B	High								
			Jan-Dec	---	---	---	---	None	---	None
BodAW:										
Bonnie	C	Negligible								
			January	0.0-1.0	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Occasional
			February	0.0-1.0	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Occasional
			March	0.0-1.0	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Occasional
			April	0.0-1.0	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Occasional
			May	1.5-3.5	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Occasional
			June	2.0-4.0	>6.0	0.0-0.5	Very brief	Occasional	Very brief	Occasional
			July	3.0-5.0	>6.0	0.0-0.5	Very brief	Occasional	Very brief	Rare
			August	3.5-6.0	>6.0	0.0-0.5	Very brief	Occasional	Very brief	Rare
			September	5.0-6.0	>6.0	0.0-0.5	Very brief	Rare	Very brief	Rare
			October	5.0-6.0	>6.0	0.0-0.5	Very brief	Rare	Very brief	Rare
			November	0.5-1.5	>6.0	0.0-0.5	Very brief	Occasional	Very brief	Rare
			December	0.0-1.0	>6.0	0.0-0.5	Very brief	Frequent	Very brief	Rare
BvoG:										
Brownstown	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Gilwood	B	High								
			Jan-Dec	---	---	---	---	None	---	None
CcaG:										
Caneyville	C	Very high								
			Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
CkkB2:										
Cincinnati----------------	C	Medium								
			January	1.7-3.0	2.5-3.5	---	---	None	---	None
			February	1.7-3.0	2.5-3.5	---	---	None	---	None
			March	1.7-3.0	2.5-3.5	---	---	None	---	None
			April	1.7-3.0	2.5-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-4.0	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	1.7-3.0	2.5-3.5	---	---	None	---	None
CldC2:										
Cincinnati----------------	C	High								
			January	1.7-3.0	2.5-3.5	---	---	None	---	None
			February	1.7-3.0	2.5-3.5	---	---	None	---	None
			March	1.7-3.0	2.5-3.5	---	---	None	---	None
			April	1.7-3.0	2.5-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-4.0	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	1.7-3.0	2.5-3.5	---	---	None	---	None
Blocher-------------------	C	Very high								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
CldC3:										
Cincinnati----------------	C	Very high								
			January	1.0-1.7	2.0-2.5	---	---	None	---	None
			February	1.0-1.7	2.0-2.5	---	---	None	---	None
			March	1.0-1.7	2.0-2.5	---	---	None	---	None
			April	1.0-1.7	2.0-2.5	---	---	None	---	None
			May	2.0-2.5	2.5-3.5	---	---	None	---	None
			November	1.5-2.0	2.5-3.0	---	---	None	---	None
			December	1.0-1.7	2.0-2.5	---	---	None	---	None
Blocher-------------------	C	Very high								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
ClfA:										
Cobbsfork	C	Low								
			January	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			February	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			March	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			April	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			May	0.0-1.5	5.0-6.7	0.0-0.5	Very brief	Frequent	---	None
			June	1.0-3.5	5.0-6.7	0.0-0.5	Very brief	Occasional	---	None
			July	3.5-6.0	>6.0	0.0-0.5	Very brief	Occasional	---	None
			August	3.5-6.0	>6.0	0.0-0.5	Very brief	Occasional	---	None
			September	---	---	0.0-0.5	Very brief	Rare	---	None
			October	---	---	0.0-0.5	Very brief	Rare	---	None
			November	0.0-1.5	3.5-5.0	0.0-0.5	Very brief	Occasional	---	None
			December	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
ComC:										
Coolville	C	High								
			January	1.0-2.0	2.0-3.3	---	---	None	---	None
			February	1.0-2.0	2.0-3.3	---	---	None	---	None
			March	1.0-2.0	2.0-3.3	---	---	None	---	None
			April	1.0-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.3	3.3-5.0	---	---	None	---	None
			June	2.5-3.3	3.3-5.0	---	---	None	---	None
			November	2.5-3.3	3.3-5.0	---	---	None	---	None
			December	1.0-2.0	2.0-3.3	---	---	None	---	None
ConC3:										
Coolville	C	Very high								
			January	1.0-2.0	3.3-5.0	---	---	None	---	None
			February	1.0-2.0	3.3-5.0	---	---	None	---	None
			March	1.0-2.0	3.3-5.0	---	---	None	---	None
			April	1.0-2.0	3.3-5.0	---	---	None	---	None
			May	2.0-3.3	3.3-5.0	---	---	None	---	None
			June	2.5-3.3	3.3-5.0	---	---	None	---	None
			November	2.5-3.3	3.3-5.0	---	---	None	---	None
			December	1.0-2.0	3.3-5.0	---	---	None	---	None
Rarden	C	Very high								
			January	1.0-2.0	1.7-3.3	---	---	None	---	None
			February	1.0-2.0	1.7-3.3	---	---	None	---	None
			March	1.0-2.0	1.7-3.3	---	---	None	---	None
			April	1.0-2.0	1.7-3.3	---	---	None	---	None
			December	1.0-2.0	1.7-3.3	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
ConD:										
Coolville-----------------	C	Very high								
			January	1.0-2.0	2.0-3.3	---	---	None	---	None
			February	1.0-2.0	2.0-3.3	---	---	None	---	None
			March	1.0-2.0	2.0-3.3	---	---	None	---	None
			April	1.0-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.3	3.3-5.0	---	---	None	---	None
			June	2.5-3.3	3.3-5.0	---	---	None	---	None
			November	2.5-3.3	3.3-5.0	---	---	None	---	None
			December	1.0-2.0	2.0-3.3	---	---	None	---	None
Rarden--------------------	C	Very high								
			January	1.0-2.0	1.7-3.3	---	---	None	---	None
			February	1.0-2.0	1.7-3.3	---	---	None	---	None
			March	1.0-2.0	1.7-3.3	---	---	None	---	None
			April	1.0-2.0	1.7-3.3	---	---	None	---	None
			December	1.0-2.0	1.7-3.3	---	---	None	---	None
CspA:										
Crider--------------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
CspB2:										
Crider--------------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
CtrB2:										
Crider--------------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
CtwB:										
Crider--------------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
Bedford-------------------	C	Medium								
			January	1.5-2.5	1.7-3.1	---	---	None	---	None
			February	1.5-2.5	1.7-3.1	---	---	None	---	None
			March	1.5-2.5	1.7-3.1	---	---	None	---	None
			April	1.5-2.5	2.0-3.1	---	---	None	---	None
			May	2.0-2.5	2.5-3.1	---	---	None	---	None
			November	2.0-2.5	2.5-3.1	---	---	None	---	None
			December	1.5-2.5	2.0-3.1	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
CtwB:										
Navilleton	C	Medium								
			Jan-Dec	---	---	---	---	None	---	None
CwaAQ:										
Cuba	B	Very low								
			January	---	---	---	---	None	Very brief	Rare
			February	---	---	---	---	None	Very brief	Rare
			March	---	---	---	---	None	Very brief	Rare
			April	---	---	---	---	None	Very brief	Rare
			May	---	---	---	---	None	Very brief	Rare
			June	---	---	---	---	None	Very brief	Rare
			July	---	---	---	---	None	Very brief	Very rare
			August	---	---	---	---	None	Very brief	Very rare
			September	---	---	---	---	None	Very brief	Very rare
			October	---	---	---	---	None	Very brief	Very rare
			November	---	---	---	---	None	Very brief	Very rare
			December	---	---	---	---	None	Very brief	Very rare
CxgC3:										
Crider	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
CxhC2:										
Crider	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
CxmC2:										
Crider	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
CxnC3:										
Crider	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
DbrG:										
Deam----------------------	C	Very high								
			Jan-Dec	---	---	---	---	None	---	None
DdsAW:										
Dearborn------------------	B	Very low								
			January	---	---	---	---	None	Very brief	Occasional
			February	---	---	---	---	None	Very brief	Occasional
			March	---	---	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	Very brief	Occasional
			June	---	---	---	---	None	Very brief	Occasional
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare
DfnA:										
Dubois--------------------	C	Medium								
			January	0.5-2.0	2.0-3.5	---	---	None	---	None
			February	0.5-2.0	2.0-3.5	---	---	None	---	None
			March	0.5-2.0	2.0-3.5	---	---	None	---	None
			April	0.5-2.0	2.0-3.5	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	2.5-3.5	---	---	None	---	None
			December	0.5-2.0	2.0-3.5	---	---	None	---	None
DtvC2:										
Deputy--------------------	C	High								
			January	1.5-2.5	2.0-3.5	---	---	None	---	None
			February	1.5-2.5	2.0-3.5	---	---	None	---	None
			March	1.5-2.5	2.0-3.5	---	---	None	---	None
			April	1.5-2.5	2.0-3.5	---	---	None	---	None
			May	2.0-3.5	3.5-5.0	---	---	None	---	None
			June	2.5-3.5	3.5-5.0	---	---	None	---	None
			November	2.0-3.0	3.0-3.5	---	---	None	---	None
			December	1.5-2.5	2.0-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
DtvC2:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
EbpD2:										
Eden----------------------	C	Very high								
			Jan-Dec	---	---	---	---	None	---	None
EesA:										
Elkinsville---------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
Millstone-----------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
EesB:										
Elkinsville---------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
Millstone-----------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
EesC2:										
Elkinsville---------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Millstone-----------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
EesD2:										
Elkinsville---------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Millstone-----------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table Upper limit	Water table Lower limit	Ponding Surface water depth	Ponding Duration	Ponding Frequency	Flooding Duration	Flooding Frequency
				Ft	Ft	Ft				
EesFQ:										
Elkinsville	B	High								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
Millstone	B	High								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
EsaG:										
Eden	C	Very high								
			Jan-Dec	---	---	---	---	None	---	None
GgbG:										
Gilwood	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Brownstown	B	High								
			Jan-Dec	---	---	---	---	None	---	None
GgfD:										
Gilwood	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Wrays	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
GgfE2:										
Gilwood-------------------	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Wrays---------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
GmaG:										
Gnawbone------------------	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Kurtz---------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
GyaD2:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
GyaD3:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
GyaD5:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
GykD2:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
GykD3:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
HcaA:										
Hatfield------------------	C	Medium								
			January	0.5-2.0	2.0-3.5	---	---	None	---	None
			February	0.5-2.0	2.0-3.5	---	---	None	---	None
			March	0.5-2.0	2.0-3.5	---	---	None	---	None
			April	0.5-2.0	2.0-3.5	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	2.5-3.5	---	---	None	---	None
			December	0.5-2.0	2.0-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
HccB2:										
Haubstadt-----------------	C	Medium								
			January	1.5-2.0	2.0-3.0	---	---	None	---	None
			February	1.5-2.0	2.0-3.0	---	---	None	---	None
			March	1.5-2.0	2.0-3.0	---	---	None	---	None
			April	1.5-2.0	2.0-3.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.0	2.0-3.0	---	---	None	---	None
HcdC2:										
Haubstadt-----------------	C	High								
			January	1.5-2.0	2.0-3.0	---	---	None	---	None
			February	1.5-2.0	2.0-3.0	---	---	None	---	None
			March	1.5-2.0	2.0-3.0	---	---	None	---	None
			April	1.5-2.0	2.0-3.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.0	2.0-3.0	---	---	None	---	None
Shircliff-----------------	C	High								
			January	1.5-2.5	3.3-5.0	---	---	None	---	None
			February	1.5-2.5	3.3-5.0	---	---	None	---	None
			March	1.5-2.5	3.3-5.0	---	---	None	---	None
			April	1.5-2.5	3.3-5.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.5-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.5-3.5	3.3-5.0	---	---	None	---	None
			December	1.5-2.5	3.3-5.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
HceC3:										
Haubstadt-----------------	C	Very high								
			January	1.0-1.5	1.5-2.5	---	---	None	---	None
			February	1.0-1.5	1.5-2.5	---	---	None	---	None
			March	1.0-1.5	1.5-2.5	---	---	None	---	None
			April	1.0-1.5	1.5-2.5	---	---	None	---	None
			May	1.5-3.0	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.0-1.5	1.5-2.5	---	---	None	---	None
Shircliff-----------------	C	High								
			January	1.5-2.5	3.3-5.0	---	---	None	---	None
			February	1.5-2.5	3.3-5.0	---	---	None	---	None
			March	1.5-2.5	3.3-5.0	---	---	None	---	None
			April	1.5-2.5	3.3-5.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.5-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.5-3.5	3.3-5.0	---	---	None	---	None
			December	1.5-2.5	3.3-5.0	---	---	None	---	None
HcgAH:										
Haymond-------------------	B	Very low								
			January	---	---	---	---	None	Brief	Frequent
			February	---	---	---	---	None	Brief	Frequent
			March	---	---	---	---	None	Brief	Frequent
			April	---	---	---	---	None	Brief	Frequent
			May	---	---	---	---	None	Brief	Occasional
			June	---	---	---	---	None	Brief	Occasional
			July	---	---	---	---	None	Brief	Occasional
			August	---	---	---	---	None	Brief	Rare
			September	---	---	---	---	None	Brief	Rare
			October	---	---	---	---	None	Brief	Rare
			November	---	---	---	---	None	Brief	Rare
			December	---	---	---	---	None	Brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
HcgAV:										
Haymond	B	Very low								
			January	---	---	---	---	None	Very brief	Frequent
			February	---	---	---	---	None	Very brief	Frequent
			March	---	---	---	---	None	Very brief	Frequent
			April	---	---	---	---	None	Very brief	Frequent
			May	---	---	---	---	None	Very brief	Occasional
			June	---	---	---	---	None	Very brief	Occasional
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Occasional
HcgAW:										
Haymond	B	Very low								
			January	---	---	---	---	None	Very brief	Occasional
			February	---	---	---	---	None	Very brief	Occasional
			March	---	---	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	Very brief	Occasional
			June	---	---	---	---	None	Very brief	Occasional
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare
HerE:										
Hickory	B	High								
			Jan-Dec	---	---	---	---	None	---	None
Bonnell	C	High								
			Jan-Dec	---	---	---	---	None	---	None
HtwD2:										
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville	C	High								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
HtzD3:										
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
HufAK:										
Huntington----------------	B	Very low								
			January	---	---	---	---	None	Brief	Occasional
			February	---	---	---	---	None	Brief	Occasional
			March	---	---	---	---	None	Brief	Occasional
			April	---	---	---	---	None	Brief	Occasional
			May	---	---	---	---	None	Brief	Occasional
			June	---	---	---	---	None	Brief	Occasional
			July	---	---	---	---	None	Brief	Rare
			August	---	---	---	---	None	Brief	Rare
			September	---	---	---	---	None	Brief	Rare
			October	---	---	---	---	None	Brief	Rare
			November	---	---	---	---	None	Brief	Rare
			December	---	---	---	---	None	Brief	Rare
HuhD2:										
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
HujD3:										
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
JaeB2:										
Jennings------------------	C	Medium								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-3.5	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
JafC2:										
Jennings------------------	C	High								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-3.5	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
Blocher, hard bedrock substratum---------------	C	High								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
JafC3:										
Jennings------------------	C	Very high								
			January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	1.5-2.5	2.0-3.0	---	---	None	---	None
			May	2.0-2.5	2.5-3.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None
Blocher, hard bedrock substratum---------------	C	Very high								
			January	2.0-3.0	2.5-3.5	---	---	None	---	None
			February	2.0-3.0	2.5-3.5	---	---	None	---	None
			March	2.0-3.0	2.5-3.5	---	---	None	---	None
			April	2.0-3.0	2.5-3.5	---	---	None	---	None
			December	2.0-3.0	2.5-3.5	---	---	None	---	None
KxkC2:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Navilleton----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
KxlC3:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
KxlE3:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
KxmE2:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
KxoC2:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Navilleton----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Haggatt-------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
KxpD2:										
Knobcreek-----------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
KxpD2:										
Haggatt	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Caneyville	C	High								
			Jan-Dec	---	---	---	---	None	---	None
LpoAK:										
Lindside	B	Negligible								
			January	1.5-2.5	>6.0	---	---	None	Brief	Occasional
			February	1.5-2.5	>6.0	---	---	None	Brief	Occasional
			March	1.5-2.5	>6.0	---	---	None	Brief	Occasional
			April	1.5-2.5	>6.0	---	---	None	Brief	Occasional
			May	2.5-4.5	>6.0	---	---	None	Brief	Occasional
			June	3.0-5.0	>6.0	---	---	None	Brief	Occasional
			July	3.5-6.0	>6.0	---	---	None	Brief	Rare
			August	3.5-6.0	>6.0	---	---	None	Brief	Rare
			September	---	---	---	---	None	Brief	Rare
			October	---	---	---	---	None	Brief	Rare
			November	2.5-4.5	>6.0	---	---	None	Brief	Rare
			December	1.5-2.5	>6.0	---	---	None	Brief	Rare
McgC2:										
Markland	C	High								
			Jan-Dec	---	---	---	---	None	---	None
McnGQ:										
Markland	C	Very high								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
McpC3:										
Markland	C	High								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
McuDQ:										
Markland------------------	C	High								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
MdqDQ:										
Markland------------------	C	High								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
MhuA:										
McGary--------------------	C	Medium								
			January	0.5-2.0	3.0-4.5	---	---	None	---	None
			February	0.5-2.0	3.0-4.5	---	---	None	---	None
			March	0.5-2.0	3.0-4.5	---	---	None	---	None
			April	0.5-2.0	3.0-4.5	---	---	None	---	None
			May	1.0-3.5	3.5-5.0	---	---	None	---	None
			June	1.0-3.5	3.5-5.0	---	---	None	---	None
			July	3.5-6.0	>6.0	---	---	None	---	None
			August	3.5-6.0	>6.0	---	---	None	---	None
			November	1.0-3.0	3.0-4.5	---	---	None	---	None
			December	0.5-2.0	3.0-4.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
MhyA:										
Medora--------------------	C	Medium								
			January	1.7-3.0	2.0-3.5	---	---	None	---	None
			February	1.7-3.0	2.0-3.5	---	---	None	---	None
			March	1.7-3.0	2.0-3.5	---	---	None	---	None
			April	1.7-3.0	2.0-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-4.0	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	1.7-3.0	2.0-3.5	---	---	None	---	None
MhyB2:										
Medora--------------------	C	Medium								
			January	1.7-3.0	1.7-3.5	---	---	None	---	None
			February	1.7-3.0	1.7-3.5	---	---	None	---	None
			March	1.7-3.0	1.7-3.5	---	---	None	---	None
			April	1.7-3.0	2.0-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-4.0	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	1.7-3.0	2.0-3.5	---	---	None	---	None
MhyC2:										
Medora--------------------	C	High								
			January	1.7-3.0	1.7-3.5	---	---	None	---	None
			February	1.7-3.0	1.7-3.5	---	---	None	---	None
			March	1.7-3.0	1.7-3.5	---	---	None	---	None
			April	1.7-3.0	2.0-3.5	---	---	None	---	None
			May	2.5-3.0	3.0-4.0	---	---	None	---	None
			November	2.5-3.0	3.0-3.5	---	---	None	---	None
			December	1.7-3.0	2.0-3.5	---	---	None	---	None
MhyC3:										
Medora--------------------	C	Very high								
			January	1.0-1.5	1.0-1.7	---	---	None	---	None
			February	1.0-1.5	1.0-1.7	---	---	None	---	None
			March	1.0-1.5	1.0-1.7	---	---	None	---	None
			April	1.0-1.5	1.0-1.7	---	---	None	---	None
			May	1.5-2.5	2.0-3.0	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.0-1.5	1.0-1.7	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
MsvA:										
Montgomery	C	Negligible								
			January	0.0-1.0	>6.0	0.0-1.0	Very brief	Frequent	---	None
			February	0.0-1.0	>6.0	0.0-1.0	Very brief	Frequent	---	None
			March	0.0-1.0	>6.0	0.0-1.0	Very brief	Frequent	---	None
			April	0.0-1.0	>6.0	0.0-1.0	Very brief	Frequent	---	None
			May	1.5-3.5	>6.0	0.0-1.0	Very brief	Frequent	---	None
			June	2.0-4.0	>6.0	0.0-1.0	Very brief	Occasional	---	None
			July	3.0-5.0	>6.0	0.0-1.0	Very brief	Occasional	---	None
			August	3.5-6.0	>6.0	0.0-1.0	Very brief	Occasional	---	None
			September	5.0-6.0	>6.0	0.0-1.0	Very brief	Rare	---	None
			October	5.0-6.0	>6.0	0.0-1.0	Very brief	Rare	---	None
			November	0.5-1.5	>6.0	0.0-1.0	Very brief	Occasional	---	None
			December	0.0-1.0	>6.0	0.0-1.0	Very brief	Frequent	---	None
NaaA:										
Nabb	C	Medium								
			January	1.5-2.0	2.0-3.3	---	---	None	---	None
			February	1.5-2.0	2.0-3.3	---	---	None	---	None
			March	1.5-2.0	2.0-3.3	---	---	None	---	None
			April	1.5-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.3	---	---	None	---	None
			December	1.5-2.0	2.0-3.3	---	---	None	---	None
NaaB2:										
Nabb	C	Medium								
			January	1.5-2.0	2.0-3.3	---	---	None	---	None
			February	1.5-2.0	2.0-3.3	---	---	None	---	None
			March	1.5-2.0	2.0-3.3	---	---	None	---	None
			April	1.5-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.3	---	---	None	---	None
			December	1.5-2.0	2.0-3.3	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
NbhAK:										
Newark	C	Negligible								
			January	0.5-2.0	>6.0	---	---	None	Brief	Occasional
			February	0.5-2.0	>6.0	---	---	None	Brief	Occasional
			March	0.5-2.0	>6.0	---	---	None	Brief	Occasional
			April	0.5-2.0	>6.0	---	---	None	Brief	Occasional
			May	2.0-4.0	>6.0	---	---	None	Brief	Occasional
			June	2.5-5.0	>6.0	---	---	None	Brief	Occasional
			July	3.0-6.0	>6.0	---	---	None	Brief	Rare
			August	3.0-6.0	>6.0	---	---	None	Brief	Rare
			September	4.0-6.0	>6.0	---	---	None	Brief	Rare
			October	4.0-6.0	>6.0	---	---	None	Brief	Rare
			November	1.5-4.0	>6.0	---	---	None	Brief	Rare
			December	0.5-2.0	>6.0	---	---	None	Brief	Rare
OfbAW:										
Oldenburg	B	Negligible								
			January	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			February	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			March	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			April	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			May	2.5-4.5	>6.0	---	---	None	Very brief	Occasional
			June	3.0-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	2.5-4.5	>6.0	---	---	None	Very brief	Rare
			December	1.5-2.5	>6.0	---	---	None	Very brief	Rare
PcrB2:										
Pekin	C	Medium								
			January	1.5-2.0	2.0-3.0	---	---	None	---	None
			February	1.5-2.0	2.0-3.0	---	---	None	---	None
			March	1.5-2.0	2.0-3.0	---	---	None	---	None
			April	1.5-2.0	2.0-3.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.0	2.0-3.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
PcrC2:										
Pekin---------------------	C	High								
			January	1.5-2.0	2.0-3.0	---	---	None	---	None
			February	1.5-2.0	2.0-3.0	---	---	None	---	None
			March	1.5-2.0	2.0-3.0	---	---	None	---	None
			April	1.5-2.0	2.0-3.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	3.0-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.0	2.0-3.0	---	---	None	---	None
PcrC3:										
Pekin---------------------	C	Very high								
			January	1.0-2.0	1.5-2.5	---	---	None	---	None
			February	1.0-2.0	1.5-2.5	---	---	None	---	None
			March	1.0-2.0	1.5-2.5	---	---	None	---	None
			April	1.0-2.0	1.5-2.5	---	---	None	---	None
			May	1.5-3.0	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	1.5-2.0	2.0-2.5	---	---	None	---	None
			December	1.0-2.0	1.5-2.5	---	---	None	---	None
PhaA:										
Peoga---------------------	C	Low								
			January	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			February	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			March	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			April	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
			May	0.0-1.5	5.0-6.7	0.0-0.5	Very brief	Frequent	---	None
			June	1.0-3.5	5.0-6.7	0.0-0.5	Very brief	Occasional	---	None
			July	3.5-6.0	>6.0	0.0-0.5	Very brief	Occasional	---	None
			August	3.5-6.0	>6.0	0.0-0.5	Very brief	Occasional	---	None
			September	---	---	0.0-0.5	Very brief	Rare	---	None
			October	---	---	0.0-0.5	Very brief	Rare	---	None
			November	0.0-1.5	3.5-5.0	0.0-0.5	Very brief	Occasional	---	None
			December	0.0-1.0	3.5-5.0	0.0-0.5	Very brief	Frequent	---	None
Pml.										
Pits, quarry										
Ppu.										
Pits, sand and gravel										

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RblD3:										
Rarden	C	Very high								
			January	1.0-2.0	2.0-3.3	---	---	None	---	None
			February	1.0-2.0	2.0-3.3	---	---	None	---	None
			March	1.0-2.0	2.0-3.3	---	---	None	---	None
			April	1.0-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.0	2.5-3.3	---	---	None	---	None
			June	2.0-3.0	2.5-3.3	---	---	None	---	None
			November	2.0-3.0	2.5-3.3	---	---	None	---	None
			December	1.0-2.0	2.0-3.3	---	---	None	---	None
RbmD5:										
Rarden	C	Very high								
			January	1.0-2.0	2.0-3.3	---	---	None	---	None
			February	1.0-2.0	2.0-3.3	---	---	None	---	None
			March	1.0-2.0	2.0-3.3	---	---	None	---	None
			April	1.0-2.0	2.0-3.3	---	---	None	---	None
			May	2.0-3.0	2.5-3.3	---	---	None	---	None
			June	2.0-3.0	2.5-3.3	---	---	None	---	None
			November	2.0-3.0	2.5-3.3	---	---	None	---	None
			December	1.0-2.0	2.0-3.3	---	---	None	---	None
RptG:										
Rohan	D	Very high								
			Jan-Dec	---	---	---	---	None	---	None
Jessietown	B	High								
			Jan-Dec	---	---	---	---	None	---	None
RtcA:										
Ryker	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
RtcB2:										
Ryker	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
RzrB2:										
Ryker	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
RztC2:										
Ryker	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RztC2:										
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
RztC3:										
Ryker---------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
RzvC2:										
Ryker---------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
RzvC3:										
Ryker---------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Grayford------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
SceB2:										
Scottsburg----------------	C	Medium								
			January	1.5-3.0	2.0-3.5	---	---	None	---	None
			February	1.5-3.0	2.0-3.5	---	---	None	---	None
			March	1.5-3.0	2.0-3.5	---	---	None	---	None
			April	1.5-3.0	2.0-3.5	---	---	None	---	None
			May	2.0-4.0	2.5-6.7	---	---	None	---	None
			June	2.0-4.0	2.5-6.7	---	---	None	---	None
			November	2.0-3.5	2.5-4.0	---	---	None	---	None
			December	1.5-3.0	2.0-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
SfyB:										
Shircliff-----------------	C	Medium								
			January	1.5-2.5	3.3-5.0	---	---	None	---	None
			February	1.5-2.5	3.3-5.0	---	---	None	---	None
			March	1.5-2.5	3.3-5.0	---	---	None	---	None
			April	1.5-2.5	3.3-5.0	---	---	None	---	None
			May	2.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.5-4.0	5.0-6.7	---	---	None	---	None
			July	4.0-6.0	>6.0	---	---	None	---	None
			November	2.5-3.5	3.3-5.0	---	---	None	---	None
			December	1.5-2.5	3.3-5.0	---	---	None	---	None
SoaB:										
Spickert------------------	C	Medium								
			January	1.5-2.5	1.7-3.0	---	---	None	---	None
			February	1.5-2.5	1.7-3.0	---	---	None	---	None
			March	1.5-2.5	1.7-3.0	---	---	None	---	None
			April	1.5-2.5	1.7-3.0	---	---	None	---	None
			May	2.0-2.5	2.5-3.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.5	1.7-3.0	---	---	None	---	None
SodB:										
Spickert------------------	C	Medium								
			January	1.5-2.5	1.7-3.0	---	---	None	---	None
			February	1.5-2.5	1.7-3.0	---	---	None	---	None
			March	1.5-2.5	1.7-3.0	---	---	None	---	None
			April	1.5-2.5	1.7-3.0	---	---	None	---	None
			May	2.0-2.5	2.5-3.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.5	1.7-3.0	---	---	None	---	None
SolC2:										
Spickert------------------	C	High								
			January	1.5-2.5	1.7-3.0	---	---	None	---	None
			February	1.5-2.5	1.7-3.0	---	---	None	---	None
			March	1.5-2.5	1.7-3.0	---	---	None	---	None
			April	1.5-2.5	1.7-3.0	---	---	None	---	None
			May	2.0-2.5	2.5-3.0	---	---	None	---	None
			November	2.0-2.5	2.5-3.0	---	---	None	---	None
			December	1.5-2.5	1.7-3.0	---	---	None	---	None
Wrays---------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Months	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
StaAQ:										
Steff----------------------	B	Negligible								
			January	1.5-2.5	>6.0	---	---	None	Very brief	Rare
			February	1.5-2.5	>6.0	---	---	None	Very brief	Rare
			March	1.5-2.5	>6.0	---	---	None	Very brief	Rare
			April	1.5-2.5	>6.0	---	---	None	Very brief	Rare
			May	2.5-4.5	>6.0	---	---	None	Very brief	Rare
			June	3.0-5.0	>6.0	---	---	None	Very brief	Rare
			July	3.5-6.0	>6.0	---	---	None	Very brief	Very rare
			August	3.5-6.0	>6.0	---	---	None	Very brief	Very rare
			September	---	---	---	---	None	Very brief	Very rare
			October	---	---	---	---	None	Very brief	Very rare
			November	2.5-4.5	>6.0	---	---	None	Very brief	Very rare
			December	1.5-2.5	>6.0	---	---	None	Very brief	Very rare
StdAQ:										
Stendal--------------------	C	Negligible								
			January	0.5-2.0	>6.0	---	---	None	Very brief	Rare
			February	0.5-2.0	>6.0	---	---	None	Very brief	Rare
			March	0.5-2.0	>6.0	---	---	None	Very brief	Rare
			April	0.5-2.0	>6.0	---	---	None	Very brief	Rare
			May	2.0-4.0	>6.0	---	---	None	Very brief	Rare
			June	2.5-5.0	>6.0	---	---	None	Very brief	Rare
			July	3.0-6.0	>6.0	---	---	None	Very brief	Very rare
			August	3.0-6.0	>6.0	---	---	None	Very brief	Very rare
			September	4.0-6.0	>6.0	---	---	None	Very brief	Very rare
			October	4.0-6.0	>6.0	---	---	None	Very brief	Very rare
			November	1.5-4.0	>6.0	---	---	None	Very brief	Very rare
			December	0.5-2.0	>6.0	---	---	None	Very brief	Very rare
StdAW:										
Stendal--------------------	C	Negligible								
			January	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			February	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			March	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			April	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			May	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
			June	2.5-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			September	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			October	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			November	1.5-4.0	>6.0	---	---	None	Very brief	Rare
			December	0.5-2.0	>6.0	---	---	None	Very brief	Rare

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
ThaC2:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
ThbC3:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
ThbD5:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
ThcD3:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Rohan---------------------	D	Very high								
			Jan-Dec	---	---	---	---	None	---	None
ThdD:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Rohan---------------------	D	Very high								
			Jan-Dec	---	---	---	---	None	---	None
TsaC3:										
Trappist------------------	C	High								
			Jan-Dec	---	---	---	---	None	---	None
Deputy--------------------	C	High								
			January	1.5-2.5	2.0-3.5	---	---	None	---	None
			February	1.5-2.5	2.0-3.5	---	---	None	---	None
			March	1.5-2.5	2.0-3.5	---	---	None	---	None
			April	1.5-2.5	2.0-3.5	---	---	None	---	None
			May	2.0-3.5	3.5-5.0	---	---	None	---	None
			June	2.5-3.5	3.5-5.0	---	---	None	---	None
			November	2.0-3.0	3.0-3.5	---	---	None	---	None
			December	1.5-2.5	2.0-3.5	---	---	None	---	None
Uaa:										
Udorthents, cut and filled	---	---								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UaoAK:										
Udifluvents, cut and filled	---	---								
			January	---	---	---	---	None	Brief	Occasional
			February	---	---	---	---	None	Brief	Occasional
			March	---	---	---	---	None	Brief	Occasional
			April	---	---	---	---	None	Brief	Occasional
			May	---	---	---	---	None	Brief	Occasional
			June	---	---	---	---	None	Brief	Occasional
			July	---	---	---	---	None	Brief	Rare
			August	---	---	---	---	None	Brief	Rare
			September	---	---	---	---	None	Brief	Rare
			October	---	---	---	---	None	Brief	Rare
			November	---	---	---	---	None	Brief	Rare
			December	---	---	---	---	None	Brief	Rare
Urban land	---	---								
			January	---	---	---	---	None	Brief	Occasional
			February	---	---	---	---	None	Brief	Occasional
			March	---	---	---	---	None	Brief	Occasional
			April	---	---	---	---	None	Brief	Occasional
			May	---	---	---	---	None	Brief	Occasional
			June	---	---	---	---	None	Brief	Occasional
			July	---	---	---	---	None	Brief	Rare
			August	---	---	---	---	None	Brief	Rare
			September	---	---	---	---	None	Brief	Rare
			October	---	---	---	---	None	Brief	Rare
			November	---	---	---	---	None	Brief	Rare
			December	---	---	---	---	None	Brief	Rare
UedA:										
Urban land	---	---								
			Jan-Dec	---	---	---	---	None	---	None
Aquents, clayey substratum	---	---								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UndAY:										
Urban land----------------	---	---								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
Udifluvents---------------	---	---								
			January	---	---	---	---	None	Brief	Rare
			February	---	---	---	---	None	Brief	Rare
			March	---	---	---	---	None	Brief	Rare
			April	---	---	---	---	None	Brief	Rare
			May	---	---	---	---	None	Brief	Rare
			June	---	---	---	---	None	Brief	Rare
			July	---	---	---	---	None	Brief	Very rare
			August	---	---	---	---	None	Brief	Very rare
			September	---	---	---	---	None	Brief	Very rare
			October	---	---	---	---	None	Brief	Very rare
			November	---	---	---	---	None	Brief	Very rare
			December	---	---	---	---	None	Brief	Very rare
UngB:										
Urban land----------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
Udarents, fragipan substratum---------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
UnkB:										
Urban land----------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
Udarents, silty substratum	---	---								
			Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UnpA:										
Urban land----------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
Udarents, loamy substratum	---	---								
			Jan-Dec	---	---	---	---	None	---	None
UnsB:										
Urban land----------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
Udarents, clayey substratum---------------	---	---								
			Jan-Dec	---	---	---	---	None	---	None
W.										
Water										
WaaAV:										
Wakeland------------------	C	Negligible								
			January	0.5-2.0	>6.0	---	---	None	Very brief	Frequent
			February	0.5-2.0	>6.0	---	---	None	Very brief	Frequent
			March	0.5-2.0	>6.0	---	---	None	Very brief	Frequent
			April	0.5-2.0	>6.0	---	---	None	Very brief	Frequent
			May	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
			June	2.5-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			September	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			October	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			November	1.5-4.0	>6.0	---	---	None	Very brief	Rare
			December	0.5-2.0	>6.0	---	---	None	Very brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
WaaAW:										
Wakeland------------------	C	Negligible								
			January	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			February	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			March	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			April	0.5-2.0	>6.0	---	---	None	Very brief	Occasional
			May	2.0-4.0	>6.0	---	---	None	Very brief	Occasional
			June	2.5-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.0-6.0	>6.0	---	---	None	Very brief	Rare
			September	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			October	4.0-6.0	>6.0	---	---	None	Very brief	Rare
			November	1.5-4.0	>6.0	---	---	None	Very brief	Rare
			December	0.5-2.0	>6.0	---	---	None	Very brief	Rare
WedB2:										
Weddel--------------------	C	Medium								
			January	1.5-3.0	2.0-3.5	---	---	None	---	None
			February	1.5-3.0	2.0-3.5	---	---	None	---	None
			March	1.5-3.0	2.0-3.5	---	---	None	---	None
			April	1.5-3.0	2.0-3.5	---	---	None	---	None
			May	2.0-2.5	2.5-3.5	---	---	None	---	None
			November	2.0-2.5	2.5-3.5	---	---	None	---	None
			December	1.5-3.0	2.0-3.5	---	---	None	---	None
WhcD:										
Wellrock------------------	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
Gnawbone------------------	B	High								
			Jan-Dec	---	---	---	---	None	---	None
WnmA:										
Whitcomb------------------	C	Medium								
			January	0.5-2.0	2.0-3.5	---	---	None	---	None
			February	0.5-2.0	2.0-3.5	---	---	None	---	None
			March	0.5-2.0	2.0-3.5	---	---	None	---	None
			April	0.5-2.0	2.0-3.5	---	---	None	---	None
			May	1.0-3.5	5.0-6.7	---	---	None	---	None
			June	2.0-3.5	5.0-6.7	---	---	None	---	None
			July	3.5-6.7	>6.0	---	---	None	---	None
			August	3.5-6.7	>6.0	---	---	None	---	None
			November	1.0-3.0	2.5-3.5	---	---	None	---	None
			December	0.5-2.0	2.0-3.5	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Months	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
WokAV:										
Wilbur--------------------	B	Negligible								
			January	1.5-2.5	>6.0	---	---	None	Very brief	Frequent
			February	1.5-2.5	>6.0	---	---	None	Very brief	Frequent
			March	1.5-2.5	>6.0	---	---	None	Very brief	Frequent
			April	1.5-2.5	>6.0	---	---	None	Very brief	Frequent
			May	2.5-4.5	>6.0	---	---	None	Very brief	Occasional
			June	3.0-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	2.5-4.5	>6.0	---	---	None	Very brief	Rare
			December	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
WokAW:										
Wilbur--------------------	B	Negligible								
			January	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			February	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			March	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			April	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			May	2.5-4.5	>6.0	---	---	None	Very brief	Occasional
			June	3.0-5.0	>6.0	---	---	None	Very brief	Occasional
			July	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			August	3.5-6.0	>6.0	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	2.5-4.5	>6.0	---	---	None	Very brief	Rare
			December	1.5-2.5	>6.0	---	---	None	Very brief	Rare
WprAW:										
Wirt---------------------	B	Very low								
			January	---	---	---	---	None	Very brief	Occasional
			February	---	---	---	---	None	Very brief	Occasional
			March	---	---	---	---	None	Very brief	Occasional
			April	---	---	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	Very brief	Occasional
			June	---	---	---	---	None	Very brief	Occasional
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare

Table 21.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
AddA:							
Avonburg	Fragipan	40-60	Noncemented	High	---	High	High
AddB2:							
Avonburg	Fragipan	40-60	Noncemented	High	---	High	High
BbhA:							
Bartle	---	---	---	High	---	High	High
BcrAQ:							
Beanblossom	Paralithic bedrock	40-60	Moderately cemented	High	---	Moderate	Moderate
BcrAW:							
Beanblossom	Paralithic bedrock	40-60	Moderately cemented	High	---	Moderate	Moderate
BdoA:							
Bedford	Fragipan	20-38	Noncemented	High	---	High	High
	Lithic bedrock	80-120	Indurated				
BdoB:							
Bedford	Fragipan	20-38	Noncemented	High	---	High	High
	Lithic bedrock	80-120	Indurated				
BfbC2:							
Blocher, soft bedrock substratum	Paralithic bedrock	60-80	Moderately cemented	High	Medium	High	High
Weddel	Paralithic bedrock	60-90	Moderately cemented	High	Medium	High	High
BfcC3:							
Blocher, soft bedrock substratum	Paralithic bedrock	60-80	Moderately cemented	High	Medium	High	High
Weddel	Paralithic bedrock	60-80	Moderately cemented	High	Medium	High	High
BnyD3:							
Bonnell	---	---	---	Moderate	Medium	High	High
BobE5:							
Bonnell	---	---	---	Moderate	Medium	High	High
Hickory	---	---	---	Moderate	Medium	Moderate	Moderate
BodAW:							
Bonnie	---	---	---	High	---	High	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
BvoG:							
Brownstown-------	Lithic bedrock	20-40	Strongly cemented	Moderate	Medium	Low	High
Gilwood----------	Lithic bedrock	20-40	Very strongly cemented	Moderate	Medium	Moderate	High
CcaG:							
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
Rock outcrop-----	Lithic bedrock	0	Indurated	---	---	---	---
CkkB2:							
Cincinnati-------	Fragipan	20-36	Noncemented	High	---	Moderate	High
CldC2:							
Cincinnati-------	Fragipan	20-36	Noncemented	High	Low	Moderate	High
Blocher----------	---	---	---	High	Low	High	High
CldC3:							
Cincinnati-------	Fragipan	10-20	Noncemented	High	Low	Moderate	High
Blocher----------	---	---	---	High	Low	High	High
ClfA:							
Cobbsfork--------	---	---	---	High	---	High	High
ComC:							
Coolville--------	Paralithic bedrock	40-60	Moderately cemented	High	Medium	High	High
ConC3:							
Coolville--------	Paralithic bedrock	40-60	Moderately cemented	High	Medium	High	High
Rarden-----------	Paralithic bedrock	20-40	Moderately cemented	High	Medium	High	High
ConD:							
Coolville--------	Paralithic bedrock	40-60	Moderately cemented	High	High	High	High
Rarden-----------	Paralithic bedrock	20-40	Moderately cemented	High	High	High	High
CspA:							
Crider-----------	Lithic bedrock	80-120	Indurated	High	---	Moderate	Moderate
CspB2:							
Crider-----------	Lithic bedrock	60-120	Indurated	High	---	Moderate	Moderate
CtrB2:							
Crider-----------	Lithic bedrock	60-120	Indurated	High	---	Moderate	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
CtwB:							
Crider	Lithic bedrock	60-120	Indurated	High	---	Moderate	High
Bedford	Fragipan	20-38	Noncemented	High	---	High	High
	Lithic bedrock	80-120	Indurated				
Navilleton	Lithic bedrock	60-120	Indurated	High	---	Moderate	High
CwaAQ:							
Cuba	---	---	---	High	---	Moderate	High
CxgC3:							
Crider	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Haggatt	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
CxhC2:							
Crider	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Haggatt	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
CxmC2:							
Crider	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Haggatt	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
CxnC3:							
Crider	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Haggatt	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
DbrG:							
Deam	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	High	High
DdsAW:							
Dearborn	---	---	---	Moderate	---	Low	Low
DfnA:							
Dubois	Fragipan	22-40	Noncemented	High	---	High	High
DtvC2:							
Deputy	Paralithic bedrock	40-60	Weakly cemented	High	Low	High	High
	Lithic bedrock	60-80	Very strongly cemented				

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
DtvC2:							
Trappist----------	Lithic bedrock	20-40	Very strongly cemented	High	Low	High	High
EbpD2:							
Eden-------------	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	Moderate	Low
EesA:							
Elkinsville------	---	---	---	High	---	Moderate	High
Millstone--------	---	---	---	Moderate	---	Moderate	High
EesB:							
Elkinsville------	---	---	---	High	---	Moderate	High
Millstone--------	---	---	---	Moderate	---	Moderate	High
EesC2:							
Elkinsville------	---	---	---	High	Low	Moderate	High
Millstone--------	---	---	---	Moderate	Low	Moderate	High
EesD2:							
Elkinsville------	---	---	---	High	Low	Moderate	High
Millstone--------	---	---	---	Moderate	Low	Moderate	High
EesFQ:							
Elkinsville------	---	---	---	High	Medium	Moderate	High
Millstone--------	---	---	---	Moderate	Medium	Moderate	High
EsaG:							
Eden-------------	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	Moderate	Low
GgbG:							
Gilwood----------	Lithic bedrock	20-40	Very strongly cemented	Moderate	Medium	Moderate	High
Brownstown-------	Lithic bedrock	20-40	Strongly cemented	Moderate	Medium	Low	High
GgfD:							
Gilwood----------	Lithic bedrock	20-40	Very strongly cemented	High	Medium	Moderate	High
Wrays------------	Lithic bedrock	40-60	Very strongly cemented	High	Medium	High	High
GgfE2:							
Gilwood----------	Lithic bedrock	20-40	Very strongly cemented	High	Medium	Moderate	High
Wrays------------	Lithic bedrock	40-60	Very strongly cemented	High	Medium	High	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
GmaG:							
Gnawbone---------	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	Moderate	High
Kurtz------------	Paralithic bedrock	40-60	Moderately cemented	High	High	Moderate	High
GyaD2:							
Grayford---------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
GyaD3:							
Grayford---------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
GyaD5:							
Grayford---------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
GykD2:							
Grayford---------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
GykD3:							
Grayford---------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
HcaA:							
Hatfield---------	---	---	---	High	---	High	High
HccB2:							
Haubstadt--------	Fragipan	20-40	Noncemented	High	---	Moderate	High
HcdC2:							
Haubstadt--------	Fragipan	20-40	Noncemented	High	Low	Moderate	High
Shircliff--------	---	---	---	High	Low	High	Moderate
HceC3:							
Haubstadt--------	Fragipan	12-20	Noncemented	High	Low	Moderate	High
Shircliff--------	---	---	---	High	Low	High	Moderate
HcgAH:							
Haymond----------	---	---	---	High	---	Low	Low
HcgAV:							
Haymond----------	---	---	---	High	---	Low	Low
HcgAW:							
Haymond----------	---	---	---	High	---	Low	Low
HerE:							
Hickory----------	---	---	---	Moderate	Medium	Moderate	Moderate
Bonnell----------	---	---	---	Moderate	Medium	High	High
HtwD2:							
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
HtzD3:							
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
HufAK:							
Huntington-------	---	---	---	High	---	Low	Moderate
HuhD2:							
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
HujD3:							
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
JaeB2:							
Jennings---------	Fragipan	20-32	Noncemented	High	---	High	High
	Lithic bedrock	60-90	Very strongly cemented				
JafC2:							
Jennings---------	Fragipan	20-32	Noncemented	High	Low	High	High
	Lithic bedrock	60-90	Very strongly cemented				
Blocher, hard bedrock substratum------	Lithic bedrock	60-80	Very strongly cemented	High	Low	High	High
JafC3:							
Jennings---------	Fragipan	15-20	Noncemented	High	Low	High	High
	Lithic bedrock	60-90	Very strongly cemented				
Blocher, hard bedrock substratum------	Lithic bedrock	60-80	Very strongly cemented	High	Low	High	High
KxkC2:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Low	High	High
Navilleton-------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
KxlC3:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Low	High	High
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Low	High	Moderate
KxlE3:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Medium	High	High
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
KxmE2:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Medium	High	High
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
KxoC2:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Low	High	High
Navilleton-------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	High
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
KxpD2:							
Knobcreek--------	Lithic bedrock	60-120	Indurated	High	Medium	High	High
Haggatt----------	Lithic bedrock	40-60	Indurated	High	Medium	High	Moderate
Caneyville-------	Lithic bedrock	20-40	Indurated	Moderate	Medium	High	Moderate
LpoAK:							
Lindside---------	---	---	---	High	---	Moderate	Low
McgC2:							
Markland---------	---	---	---	Moderate	Medium	High	Moderate
McnGQ:							
Markland---------	---	---	---	High	Medium	High	Moderate
McpC3:							
Markland---------	---	---	---	Moderate	Medium	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
McuDQ:							
Markland---------	---	---	---	Moderate	Medium	High	Moderate
MdqDQ:							
Markland---------	---	---	---	Moderate	Medium	High	Moderate
MhuA:							
McGary-----------	---	---	---	High	---	High	Low
MhyA:							
Medora-----------	Fragipan	24-36	Noncemented	High	---	Moderate	High
MhyB2:							
Medora-----------	Fragipan	20-36	Noncemented	High	---	Moderate	High
MhyC2:							
Medora-----------	Fragipan	20-36	Noncemented	High	Low	Moderate	High
MhyC3:							
Medora-----------	Fragipan	12-20	Noncemented	High	Low	Moderate	High
MsvA:							
Montgomery-------	---	---	---	High	---	High	Low
NaaA:							
Nabb-------------	Fragipan	24-40	Noncemented	High	---	High	High
NaaB2:							
Nabb-------------	Fragipan	24-40	Noncemented	High	---	High	High
NbhAK:							
Newark-----------	---	---	---	High	---	High	Low
OfbAW:							
Oldenburg--------	---	---	---	Moderate	---	Moderate	Moderate
PcrB2:							
Pekin------------	---	---	---	High	---	High	High
PcrC2:							
Pekin------------	---	---	---	High	Low	High	High
PcrC3:							
Pekin------------	---	---	---	High	Low	High	High
PhaA:							
Peoga------------	---	---	---	High	---	High	High
Pml.							
Pits, quarry							
Ppu.							
Pits, sand and gravel							
RblD3:							
Rarden-----------	Paralithic bedrock	20-40	Moderately cemented	High	High	High	High
RbmD5:							
Rarden-----------	Paralithic bedrock	20-40	Moderately cemented	High	High	High	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
RptG:							
Rohan------------	Lithic bedrock	10-20	Very strongly cemented	Moderate	Medium	High	High
Jessietown-------	Lithic bedrock	20-40	Very strongly cemented	High	Medium	Moderate	High
RtcA:							
Ryker------------	Lithic bedrock	80-120	Indurated	High	---	Moderate	Moderate
RtcB2:							
Ryker------------	Lithic bedrock	80-120	Indurated	High	---	Moderate	Moderate
RzrB2:							
Ryker------------	Lithic bedrock	60-120	Indurated	High	---	Moderate	Moderate
RztC2:							
Ryker------------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Grayford---------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
RztC3:							
Ryker------------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Grayford---------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
RzvC2:							
Ryker------------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Grayford---------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
RzvC3:							
Ryker------------	Lithic bedrock	60-120	Indurated	High	Low	Moderate	Moderate
Grayford---------	Lithic bedrock	40-60	Indurated	High	Low	High	Moderate
SceB2:							
Scottsburg-------	Lithic bedrock	60-80	Very strongly cemented	High	---	High	High
	Paralithic bedrock	60-72	Weakly cemented				
SfyB:							
Shircliff--------	---	---	---	High	---	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Soil slippage potential	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In					
SoaB:							
Spickert	Fragipan	20-36	Noncemented	High	---	High	High
	Lithic bedrock	60-80	Very strongly cemented				
SodB:							
Spickert	Fragipan	24-36	Noncemented	High	---	High	High
	Lithic bedrock	60-90	Very strongly cemented				
SolC2:							
Spickert	Fragipan	20-36	Noncemented	High	Low	High	High
	Lithic bedrock	50-80	Very strongly cemented				
Wrays	Lithic bedrock	40-60	Very strongly cemented	High	Low	High	High
StaAQ:							
Steff	---	---	---	High	---	Moderate	High
StdAQ:							
Stendal	---	---	---	High	---	High	High
StdAW:							
Stendal	---	---	---	High	---	High	High
ThaC2:							
Trappist	Lithic bedrock	20-40	Very strongly cemented	High	Low	High	High
ThbC3:							
Trappist	Lithic bedrock	20-40	Very strongly cemented	High	Low	High	High
ThbD5:							
Trappist	Lithic bedrock	20-40	Very strongly cemented	High	Medium	High	High
ThcD3:							
Trappist	Lithic bedrock	20-40	Very strongly cemented	High	Medium	High	High
Rohan	Lithic bedrock	10-20	Very strongly cemented	Moderate	Medium	High	High
ThdD:							
Trappist	Lithic bedrock	20-40	Very strongly cemented	High	Medium	High	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
ThdD:							
Rohan------------	Lithic bedrock	10-20	Very strongly cemented	Moderate	Medium	High	High
TsaC3:							
Trappist---------	Lithic bedrock	20-40	Very strongly cemented	High	Low	High	High
Deputy-----------	Paralithic bedrock	40-60	Weakly cemented	High	Low	High	High
	Lithic bedrock	60-80	Very strongly cemented				
Uaa. Udorthents, cut and filled							
UaoAK: Udifluvents, cut and filled.							
Urban land.							
UedA: Urban land.							
Aquents, clayey substratum.							
UndAY: Urban land.							
Udifluvents.							
UngB: Urban land.							
Udarents, fragipan substratum------	Fragipan	20-40	Noncemented	---	---	---	---
UnkB: Urban land.							
Udarents, silty substratum.							
UnpA: Urban land.							
Udarents, loamy substratum.							
UnsB: Urban land.							
Udarents, clayey substratum------	---	---	---	---	Medium	---	---

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Soil slippage potential	Risk of corrosion	
	Kind	Depth to top	Hardness			Uncoated steel	Concrete
		In					
W. Water							
WaaAV: Wakeland	---	---	---	High	---	Moderate	Low
WaaAW: Wakeland	---	---	---	High	---	Moderate	Low
WedB2: Weddel	Paralithic bedrock	60-90	Moderately cemented	High	---	High	High
WhcD: Wellrock	Paralithic bedrock	40-60	Moderately cemented	High	Medium	High	High
Gnawbone	Paralithic bedrock	20-40	Moderately cemented	High	Medium	Moderate	High
WnmA: Whitcomb	Lithic bedrock	60-80	Very strongly cemented	High	---	High	High
WokAV: Wilbur	---	---	---	High	---	Moderate	Low
WokAW: Wilbur	---	---	---	High	---	Moderate	Low
WprAW: Wirt	---	---	---	Moderate	---	Low	Moderate

Table 22.--Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Aquents	Clayey Aquents
Avonburg	Fine-silty, mixed, active, mesic Aeric Fragic Glossaqualfs
*Bartle	Fine-silty, mixed, active, mesic Aeric Fragic Epiaqualfs
Beanblossom	Loamy-skeletal, mixed, active, mesic Fluventic Dystrudepts
Bedford	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Blocher	Fine-silty, mixed, active, mesic Oxyaquic Hapludalfs
*Blocher	Fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs
Bonnell	Fine, mixed, active, mesic Typic Hapludalfs
Bonnie	Fine-silty, mixed, active, acid, mesic Typic Fluvaquents
Brownstown	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Caneyville	Fine, mixed, active, mesic Typic Hapludalfs
Cincinnati	Fine-silty, mixed, active, mesic Oxyaquic Fragiudalfs
Cobbsfork	Fine-silty, mixed, active, mesic Fragic Glossaqualfs
Coolville	Fine, mixed, active, mesic Aquultic Hapludalfs
Crider	Fine-silty, mixed, active, mesic Typic Paleudalfs
Cuba	Fine-silty, mixed, active, mesic Fluventic Dystrudepts
Deam	Fine, illitic, mesic Ultic Hapludalfs
Dearborn	Loamy-skeletal, mixed, superactive, mesic Fluventic Hapludolls
Deputy	Fine-silty, mixed, active, mesic Aquic Hapludults
Dubois	Fine-silty, mixed, active, mesic Aeric Fragiaqualfs
Eden	Fine, mixed, active, mesic Typic Hapludalfs
Elkinsville	Fine-silty, mixed, active, mesic Ultic Hapludalfs
Gilwood	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Gnawbone	Fine-silty, mixed, semiactive, mesic Typic Hapludults
Grayford	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Haggatt	Fine, mixed, active, mesic Typic Hapludalfs
Hatfield	Fine-silty, mixed, active, mesic Aeric Fragic Epiaqualfs
Haubstadt	Fine-silty, mixed, active, mesic Aquic Fragiudalfs
Haymond	Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Hickory	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Huntington	Fine-silty, mixed, active, mesic Fluventic Hapludolls
Jennings	Fine-silty, mixed, active, mesic Typic Fragiudults
Jessietown	Fine-silty, mixed, semiactive, mesic Typic Hapludults
Knobcreek	Fine-silty over clayey, mixed, active, mesic Typic Paleudalfs
Kurtz	Fine-silty, mixed, semiactive, mesic Ultic Hapludalfs
Lindside	Fine-silty, mixed, active, mesic Fluvaquentic Eutrudepts
Markland	Fine, mixed, active, mesic Typic Hapludalfs
McGary	Fine, mixed, active, mesic Aeric Epiaqualfs
Medora	Fine-silty, mixed, active, mesic Typic Fragiudults
Millstone	Fine-loamy, mixed, active, mesic Typic Hapludults
Montgomery	Fine, mixed, active, mesic Vertic Endoaquolls
Nabb	Fine-silty, mixed, active, mesic Aquic Fragiudalfs
Navilleton	Fine-silty, mixed, active, mesic Typic Paleudalfs
Newark	Fine-silty, mixed, active, nonacid, mesic Fluventic Endoaquepts
Oldenburg	Coarse-loamy, mixed, active, mesic Fluvaquentic Eutrudepts
*Pekin	Fine-silty, mixed, active, mesic Fragiaquic Hapludults
Peoga	Fine-silty, mixed, superactive, mesic Fragic Epiaqualfs
Rarden	Fine, mixed, active, mesic Aquultic Hapludalfs
Rohan	Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts
Ryker	Fine-silty, mixed, active, mesic Typic Paleudalfs
Scottsburg	Fine-silty, mixed, semiactive, mesic Aquic Hapludults
Shircliff	Fine, mixed, active, mesic Oxyaquic Hapludalfs
Spickert	Fine-silty, mixed, active, mesic Typic Fragiudults
Steff	Fine-silty, mixed, active, mesic Fluvaquentic Dystrudepts
Stendal	Fine-silty, mixed, active, acid, mesic Fluventic Endoaquepts
Trappist	Fine, mixed, semiactive, mesic Typic Hapludults
Udarents	Udarents
Udifluvents	Udifluvents
Udorthents	Udorthents

Table 22.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Wakeland	Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents
Weddel	Fine-silty, mixed, active, mesic Fragic Oxyaquic Hapludalfs
Wellrock	Fine-silty, mixed, active, mesic Ultic Hapludalfs
Whitcomb	Fine-silty, mixed, active, mesic Aeric Paleaquults
Wilbur	Coarse-silty, mixed, superactive, mesic Fluvaquentic Eutrudepts
Wirt	Coarse-loamy, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Wrays	Fine-silty, mixed, active, mesic Typic Hapludults

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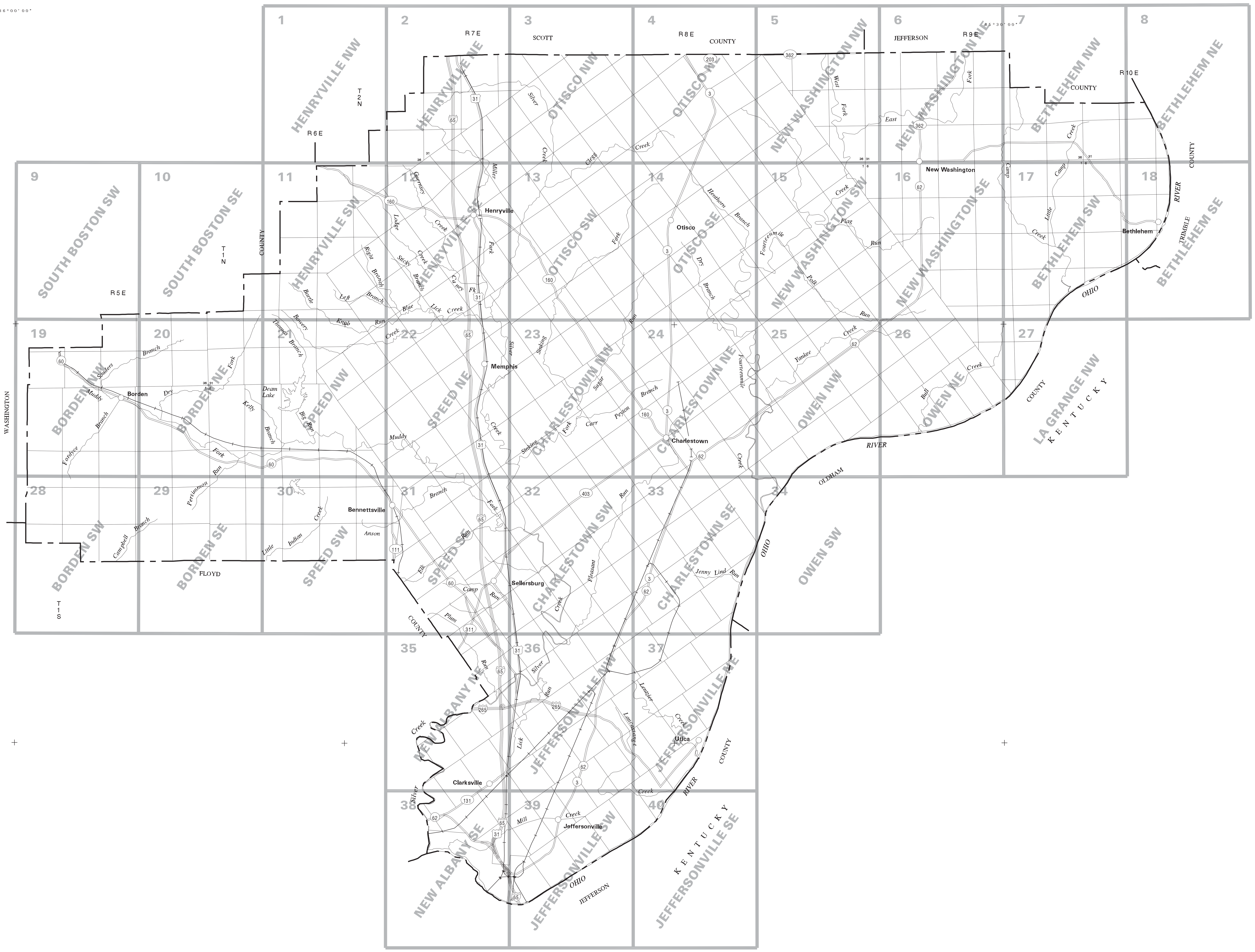


SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

N

INDEX TO MAP SHEETS
CLARK COUNTY, INDIANA

MILES

KILOMETERS

SCALE = 1:100000

SOIL LEGEND

This legend is part of the Indiana State legend. Map symbols consist of a combination of letters or of letters and numbers. The initial one to three letters represent the map unit. A capital letter following the first three letters indicates the slope class. Map symbols without a slope class letter are for miscellaneous areas. A number 2 or 3 at the end of a symbol indicates an erosion class (2-moderate erosion; 3-severe erosion). A number 5 at the end of a symbol indicates a gullied phase. A second capital letter indicates inundation phases or other soil phases. These are H-frequently flooded, brief duration; V-frequently flooded, very brief duration; K-occasionally flooded, brief duration; W-occasionally flooded, very brief duration; Q-rarely flooded; and Y-leveed.

SYMBOL	NAME
AddA	Avonburg silt loam, 0 to 2 percent slopes
AddB2	Avonburg silt loam, 2 to 4 percent slopes, eroded
BbhA	Bartle silt loam, 0 to 2 percent slopes
BcrAQ	Beanblossom silt loam, 1 to 3 percent slopes, rarely flooded
BcrAW	Beanblossom silt loam, 1 to 3 percent slopes, occasionally flooded, very brief duration
BdoA	Bedford silt loam, 0 to 2 percent slopes
BdoB	Bedford silt loam, 2 to 6 percent slopes
BfbC2	Blocher, soft bedrock substratum-Weddel silt loams, 6 to 12 percent slopes, eroded
BfcC3	Blocher, soft bedrock substratum-Weddel complex, 6 to 12 percent slopes, severely eroded
BnyD3	Bonnell clay loam, 12 to 22 percent slopes, severely eroded
BobE5	Bonnell-Hickory clay loams, 15 to 30 percent slopes, gullied
BodAW	Bonnie silt loam, 0 to 1 percent slopes, occasionally flooded, very brief duration
BvoG	Brownstown-Gilwood silt loams, 25 to 75 percent slopes
CcaG	Caneyville-Rock outcrop complex, 25 to 60 percent slopes
CkkB2	Cincinnati silt loam, 2 to 6 percent slopes, eroded
CldC2	Cincinnati-Blocher silt loams, 6 to 12 percent slopes, eroded
CldC3	Cincinnati-Blocher silt loams, 6 to 12 percent slopes, severely eroded
ClfA	Cobbsfork silt loam, 0 to 1 percent slopes
ComC	Coolville silt loam, 6 to 12 percent slopes
ConC3	Coolville-Rarden complex, 6 to 12 percent slopes, severely eroded
ConD	Coolville-Rarden complex, 12 to 18 percent slopes
CspA	Crider silt loam, 0 to 2 percent slopes
CspB2	Crider silt loam, 2 to 6 percent slopes, eroded
CtrB2	Crider silt loam, karst, undulating, eroded
CtwB	Crider-Bedford-Navilleton silt loams, 2 to 6 percent slopes
CwaAQ	Cuba silt loam, 0 to 2 percent slopes, rarely flooded
CxgC3	Crider-Haggatt complex, 6 to 12 percent slopes, severely eroded
CxhC2	Crider-Haggatt silt loams, 6 to 12 percent slopes, eroded
CxmC2	Crider-Haggatt silt loams, karst, rolling, eroded
CxnC3	Crider-Haggatt complex, karst, rolling, severely eroded
DbrG	Deam silty clay loam, 20 to 55 percent slopes
DdsAW	Dearborn silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
DfnA	Dubois silt loam, 0 to 2 percent slopes
DtvC2	Deputy-Trappist silt loams, 6 to 12 percent slopes, eroded
EbpD2	Eden silty clay loam, 12 to 25 percent slopes, eroded
EesA	Elkinsville-Millstone silt loams, 0 to 2 percent slopes
EesB	Elkinsville-Millstone silt loams, 2 to 6 percent slopes
EesC2	Elkinsville-Millstone silt loams, 6 to 12 percent slopes, eroded
EesD2	Elkinsville-Millstone silt loams, 12 to 18 percent slopes, eroded
EesFQ	Elkinsville-Millstone silt loams, 18 to 40 percent slopes, rarely flooded
EsaG	Eden silty clay loam, 25 to 60 percent slopes, very rocky
GgbG	Gilwood-Brownstown silt loams, 25 to 75 percent slopes
GgfD	Gilwood-Wrays silt loams, 6 to 18 percent slopes
GgfE2	Gilwood-Wrays silt loams, 12 to 25 percent slopes, eroded
GmaG	Gnawbone-Kurtz silt loams, 20 to 60 percent slopes
GyaD2	Grayford silt loam, 12 to 25 percent slopes, eroded
GyaD3	Grayford silt loam, 12 to 25 percent slopes, severely eroded
GyaD5	Grayford silt loam, 12 to 25 percent slopes, gullied
GykD2	Grayford silt loam, karst, hilly, eroded
GykD3	Grayford silt loam, karst, hilly, severely eroded
HcaA	Hatfield silt loam, 0 to 2 percent slopes
HccB2	Haubstadt silt loam, 2 to 6 percent slopes, eroded
HcdC2	Haubstadt-Shircliff silt loams, 6 to 15 percent slopes, eroded
HceC3	Haubstadt-Shircliff complex, 6 to 15 percent slopes, severely eroded
HcgAH	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
HcgAV	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration
HcgAW	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
HerE	Hickory-Bonnell complex, 12 to 25 percent slopes
HtwD2	Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded
HtzD3	Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded
HufAK	Huntington silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration
HuhD2	Haggatt-Caneyville silt loams, karst, hilly, eroded
HujD3	Haggatt-Caneyville complex, karst, hilly, severely eroded
JaeB2	Jennings silt loam, 2 to 6 percent slopes, eroded
JafC2	Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, eroded
JafC3	Jennings-Blocher, hard bedrock substratum, silt loams, 6 to 12 percent slopes, severely eroded
KxkC2	Knobcreek-Navilleton silt loams, 6 to 12 percent slopes, eroded
KxlC3	Knobcreek-Haggatt-Caneyville complex, 6 to 12 percent slopes, severely eroded
KxlE3	Knobcreek-Haggatt-Caneyville complex, 12 to 25 percent slopes, severely eroded
KxmE2	Knobcreek-Haggatt-Caneyville silt loams, 12 to 25 percent slopes, eroded
KxoC2	Knobcreek-Navilleton-Haggatt silt loams, karst, rolling, eroded
KxpD2	Knobcreek-Haggatt-Caneyville silt loams, karst, hilly, eroded
LpoAK	Lindside silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration
McgC2	Markland silt loam, 6 to 12 percent slopes, eroded
McnGQ	Markland silt loam, 18 to 50 percent slopes, rarely flooded
McpC3	Markland silty clay loam, 6 to 12 percent slopes, severely eroded
McuDQ	Markland silty clay loam, 12 to 25 percent slopes, severely eroded, rarely flooded
MdqDQ	Markland silt loam, 12 to 25 percent slopes, eroded, rarely flooded
MhuA	McGary silt loam, 0 to 2 percent slopes
MhyA	Medora silt loam, 0 to 2 percent slopes
MhyB2	Medora silt loam, 2 to 6 percent slopes, eroded
MhyC2	Medora silt loam, 6 to 12 percent slopes, eroded
MhyC3	Medora silt loam, 6 to 12 percent slopes, severely eroded
MsvA	Montgomery silty clay loam, 0 to 1 percent slopes
NaaA	Nabb silt loam, 0 to 2 percent slopes
NaaB2	Nabb silt loam, 2 to 6 percent slopes, eroded
NbhAK	Newark silt loam, 0 to 2 percent slopes, occasionally flooded, brief duration
OfbAW	Oldenburg loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
PcrB2	Pekin silt loam, 2 to 6 percent slopes, eroded
PcrC2	Pekin silt loam, 6 to 12 percent slopes, eroded
PcrC3	Pekin silt loam, 6 to 12 percent slopes, severely eroded
PhaA	Peoga silt loam, 0 to 1 percent slopes
Pml	Pits, quarry
Ppu	Pits, sand and gravel
RblD3	Rarden silty clay loam, 12 to 18 percent slopes, severely eroded
RbmD5	Rarden silty clay, 6 to 18 percent slopes, gullied
RptG	Rohan-Jessietown complex, 25 to 60 percent slopes, rocky
RtcA	Ryker silt loam, 0 to 2 percent slopes
RtcB2	Ryker silt loam, 2 to 6 percent slopes, eroded
RzrB2	Ryker silt loam, karst, undulating, eroded
RztC2	Ryker-Grayford silt loams, 6 to 12 percent slopes, eroded
RztC3	Ryker-Grayford silt loams, 6 to 12 percent slopes, severely eroded
RzvC2	Ryker-Grayford silt loams, karst, rolling, eroded
RzvC3	Ryker-Grayford silt loams, karst, rolling, severely eroded
SceB2	Scottsburg silt loam, 2 to 4 percent slopes, eroded
SfyB	Shircliff silt loam, 2 to 6 percent slopes
SoaB	Spickert silt loam, 2 to 6 percent slopes
SodB	Spickert silt loam, terrace, 1 to 4 percent slopes
SolC2	Spickert-Wrays silt loams, 6 to 12 percent slopes, eroded
StaAQ	Steff silt loam, 0 to 2 percent slopes, rarely flooded
StdAQ	Stendal silt loam, 0 to 2 percent slopes, rarely flooded
StdAW	Stendal silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
ThaC2	Trappist silt loam, 6 to 12 percent slopes, eroded
ThbC3	Trappist silty clay loam, 6 to 12 percent slopes, severely eroded
ThbD5	Trappist silty clay loam, 6 to 18 percent slopes, gullied
ThcD3	Trappist-Rohan complex, 12 to 25 percent slopes, severely eroded
ThdD	Trappist-Rohan silt loams, 12 to 25 percent slopes
TsaC3	Trappist-Deputy complex, 6 to 12 percent slopes, severely eroded
Uaa	Udorthents, cut and filled
UaoAK	Udifluvents, cut and filled-Urban land complex, 0 to 2 percent slopes, occasionally flooded, brief duration
UedA	Urban land-Aquents, clayey substratum, complex, lake plain, 0 to 3 percent slopes
UndAY	Urban land-Udifluvents complex, leveed, 0 to 2 percent slopes
UngB	Urban land-Udarents, fragipan substratum, complex, till plain, 0 to 12 percent slopes
UnkB	Urban land-Udarents, silty substratum, complex, terrace, 0 to 6 percent slopes
UnpA	Urban land-Udarents, loamy substratum, complex, terrace, 0 to 3 percent slopes
UnsB	Urban land-Udarents, clayey substratum, complex, hills, 2 to 10 percent slopes
W	Water
WaaAV	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration
WaaAW	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
WedB2	Weddel silt loam, 2 to 6 percent slopes, eroded
WhcD	Wellrock-Gnawbone silt loams, 6 to 20 percent slopes
WnmA	Whitcomb silt loam, 0 to 2 percent slopes
WokAV	Wilbur silt loam, 0 to 2 percent slopes, frequently flooded, very brief duration
WokAW	Wilbur silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration
WprAW	Wirt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration

FEATURE AND SYMBOL LEGEND FOR SOIL SURVEY

CULTURAL FEATURES

BOUNDARIES

County or parish

Minor civil division

PUBLIC LAND SURVEY SYSTEM SECTION CORNER TICS

GEOGRAPHIC COORDINATE TICK

ROAD EMBLEMS

Interstate 173 79 345

Federal 287 410 224

State 52 52 347

HYDROGRAPHIC FEATURES

DRAINAGE AND IRRIGATION

Unclassified stream

Drainage end (indicates direction of flow)

SOIL SURVEY FEATURES

SOIL DELINEATIONS AND LABELS AddA BdoA

STANDARD LANDFORM AND MISCELLANEOUS SURFACE FEATURES

Bedrock escarpment

Nonbedrock escarpment

Mine or quarry

Short steep slope

Sinkhole

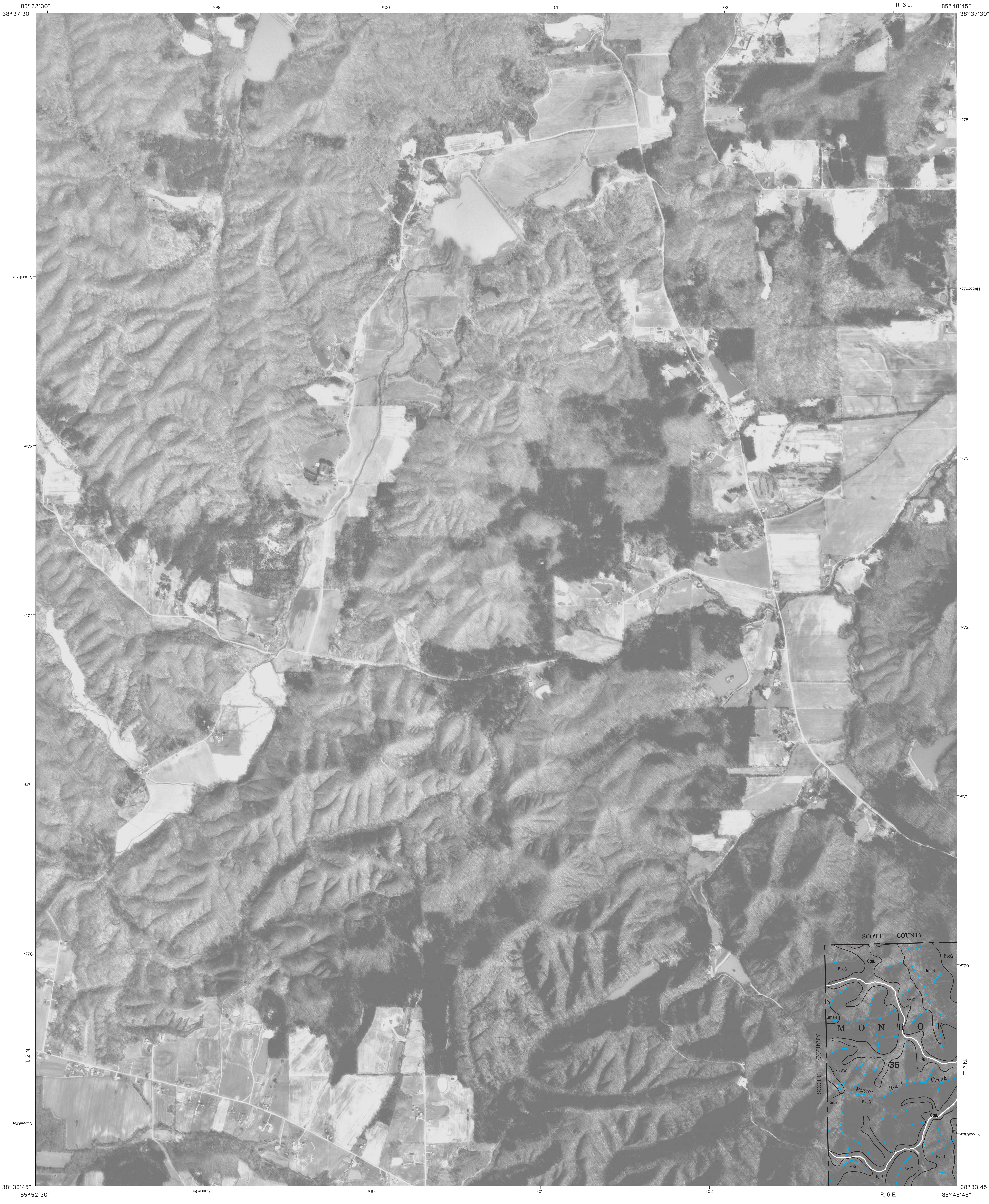
Levees

AD HOC FEATURES

Unclassified water

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
HENRYVILLE NW QUADRANGLE
SHEET NUMBER 1 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

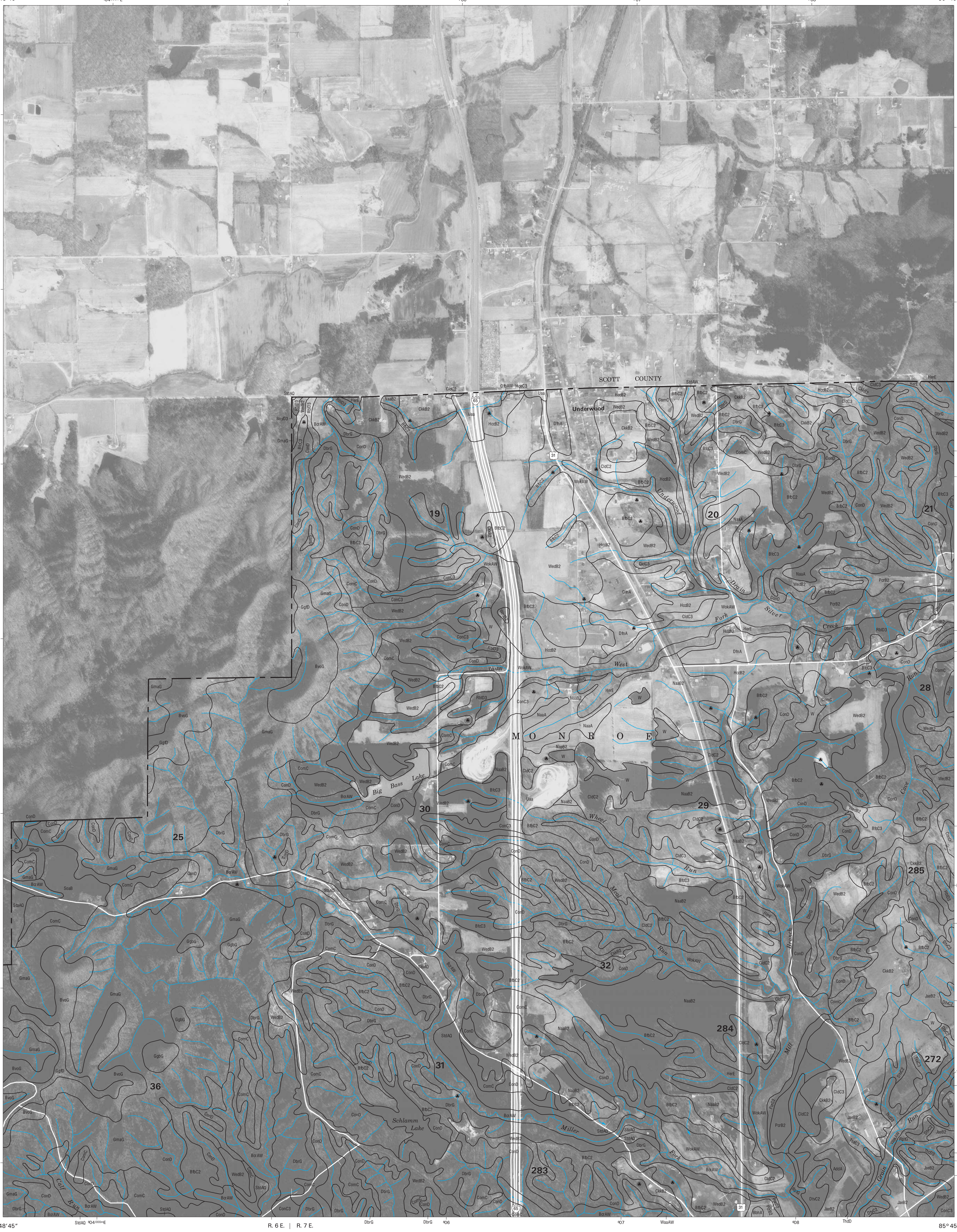
1 LITTLE YORK SE (SCOTT AND WASHINGTON CO.)
2 SCOTTSBURG SW (SCOTT COUNTY)
3 SCOTTSBURG SE (SCOTT COUNTY)
4 SOUTH BOSTON NE (SCOTT AND WASHINGTON CO.)
5 HENRYVILLE NE (SHEET 2)
6 SOUTH BOSTON SE (SHEET 10)
7 HENRYVILLE SW (SHEET 11)
8 HENRYVILLE SE (SHEET 12)

INDEX TO ADJOINING 3.75 MAPS

HENRYVILLE NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 1 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
HENRYVILLE NE QUADRANGLE
SHEET NUMBER 2 OF 40



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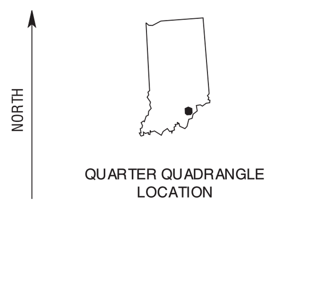
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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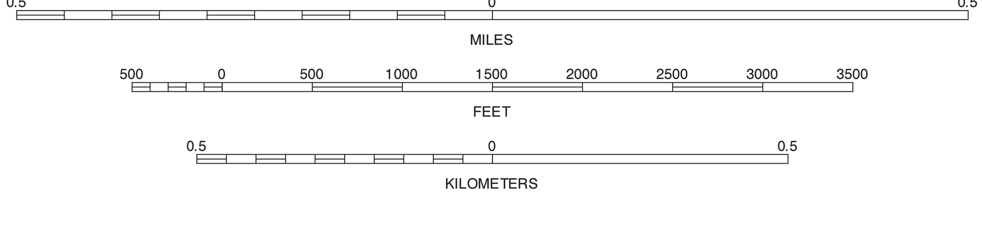


1	2	3
4		5
6	7	8

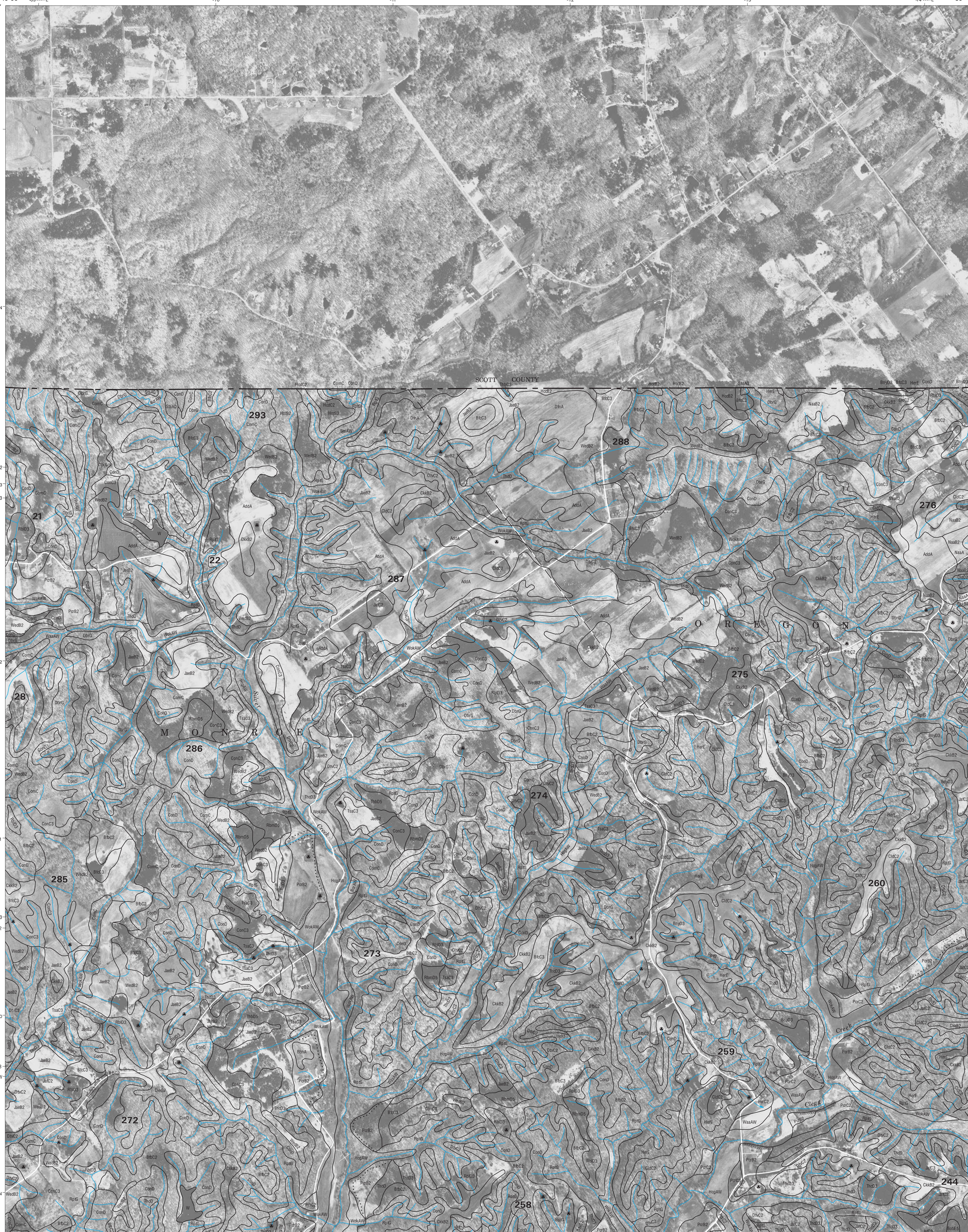
1 SCOTTSBURG SW (SCOTT COUNTY)
2 SCOTTSBURG SE (SCOTT COUNTY)
3 BLOCHER SW (SCOTT COUNTY)
4 HENRYVILLE NW (SHEET 1)
5 OTISCO NW (SHEET 3)
6 HENRYVILLE SW (SHEET 11)
7 HENRYVILLE SE (SHEET 12)
8 OTISCO SW (SHEET 13)

INDEX TO ADJOINING 3.75 MAPS

HENRYVILLE NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 2 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OTISCO NW QUADRANGLE
SHEET NUMBER 3 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES (0.5 – 0 – 0.5)

FEET (500 – 0 – 500 – 1000 – 1500 – 2000 – 2500 – 3000 – 3500)

KILOMETERS (0.5 – 0 – 0.5)

1	2	3
4		5
6	7	8

1 SCOTTSBURG SE (SCOTT COUNTY)
2 BLOCHER SW (SCOTT COUNTY)
3 BLOCHER SE (SCOTT COUNTY)
4 HENRYVILLE NE (SHEET 2)
5 OTISCO NE (SHEET 4)
6 HENRYVILLE SE (SHEET 12)
7 OTISCO SW (SHEET 13)
8 OTISCO SE (SHEET 14)

INDEX TO ADJOINING 3.75 MAPS

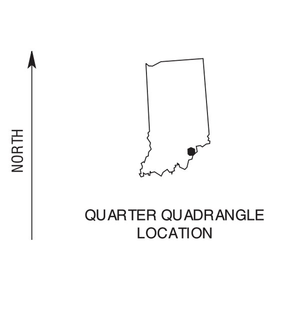
OTISCO NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 3 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OTISCO NE QUADRANGLE
SHEET NUMBER 4 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 BLOCHER SW (SCOTT COUNTY)
2 BLOCHER SE (SCOTT COUNTY)
3 KENT SW (JEFFERSON AND SCOTT COUNTIES)
4 OTISCO NW (SHEET 3)
5 NEW WASHINGTON NW (SHEET 5)
6 OTISCO SW (SHEET 13)
7 OTISCO SE (SHEET 14)
8 NEW WASHINGTON SW (SHEET 15)

INDEX TO ADJOINING 3.75 MAPS

OTISCO NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 4 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
NEW WASHINGTON NW QUADRANGLE
SHEET NUMBER 5 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 3.75 MAPS

1 BLOCHER SE (SCOTT COUNTY)
2 KENT SW (JEFFERSON AND SCOTT COUNTIES)
3 KENT SE (JEFFERSON COUNTY)
4 OTISCO NE (SHEET 4)
5 NEW WASHINGTON NE (SHEET 6)
6 OTISCO SE (SHEET 14)
7 NEW WASHINGTON SW (SHEET 15)
8 NEW WASHINGTON SE (SHEET 16)

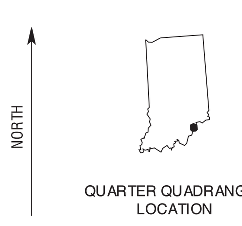
NEW WASHINGTON NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 5 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
NEW WASHINGTON NE QUADRANGLE
SHEET NUMBER 6 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5 MILES

500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500 FEET

0.5 — 0 — 0.5 KILOMETERS

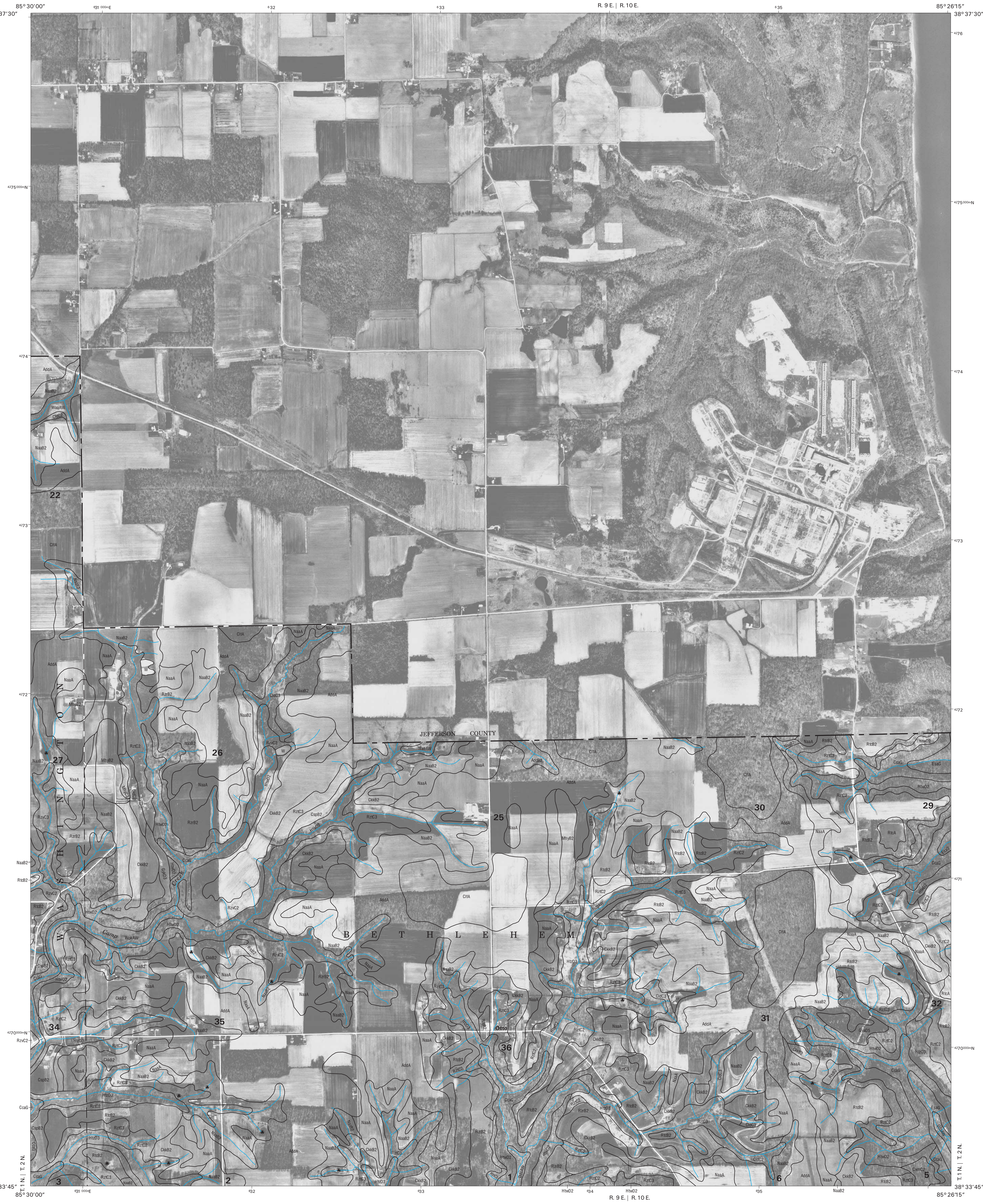
1	2	3
4		5
6	7	8

1 KENT SW (JEFFERSON AND SCOTT COUNTIES)
2 KENT SE (JEFFERSON COUNTY)
3 MADISON WEST SW (JEFFERSON COUNTY)
4 NEW WASHINGTON NW (SHEET 5)
5 BETHLEHEM NW (SHEET 7)
6 NEW WASHINGTON SW (SHEET 15)
7 NEW WASHINGTON SE (SHEET 16)
8 BETHLEHEM SW (SHEET 17)

INDEX TO ADJOINING 3.75 MAPS

NEW WASHINGTON NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 6 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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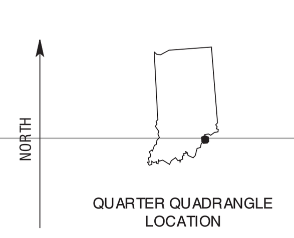
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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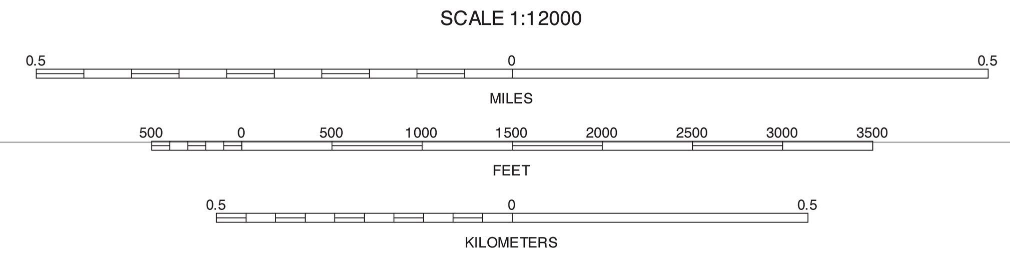

1	2	3
4		5
6	7	8

1 KENT SE (JEFFERSON COUNTY)
2 MADISON WEST SW (JEFFERSON COUNTY)
3 MADISON WEST SE (TRIMBLE COUNTY, KY)
4 NEW WASHINGTON NE (SHEET 6)
5 BETHLEHEM NE (SHEET 8)
6 NEW WASHINGTON SE (SHEET 16)
7 BETHLEHEM SW (SHEET 17)
8 BETHLEHEM SE (SHEET 18)

INDEX TO ADJOINING 3.75 MAPS

BETHLEHEM NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BETHLEHEM NE QUADRANGLE
SHEET NUMBER 8 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1 MADISON WEST SW (JEFFERSON COUNTY)
2 MADISON WEST SE (TRIMBLE COUNTY, KY)
3 MADISON EAST SW (TRIMBLE COUNTY, KY)
4 BETHLEHEM NW (SHEET 7)
5 BEDFORD NW (TRIMBLE COUNTY, KY)
6 BETHLEHEM SW (SHEET 17)
7 BETHLEHEM SE (SHEET 18)
8 BEDFORD SW (OLDHAM CO. AND TRIMBLE CO., KY)

INDEX TO ADJOINING 3.75 MAPS

BETHLEHEM NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SOUTH BOSTON SW QUADRANGLE
SHEET NUMBER 9 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

1 SALEM NE (WASHINGTON COUNTY)
2 SOUTH BOSTON NW (WASHINGTON COUNTY)
3 SOUTH BOSTON NE (SCOTT AND WASHINGTON COUNTIES)
4 SALEM SE (WASHINGTON COUNTY)
5 SOUTH BOSTON SE (SHEET 10)
6 PALMYRA NE (WASHINGTON COUNTY)
7 BORDEN NW (SHEET 19)
8 BORDEN NE (SHEET 20)

INDEX TO ADJOINING 3.75 MAPS

SOUTH BOSTON SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SOUTH BOSTON SE QUADRANGLE
SHEET NUMBER 10 OF 40

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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

1	2	3
4		5
6	7	8

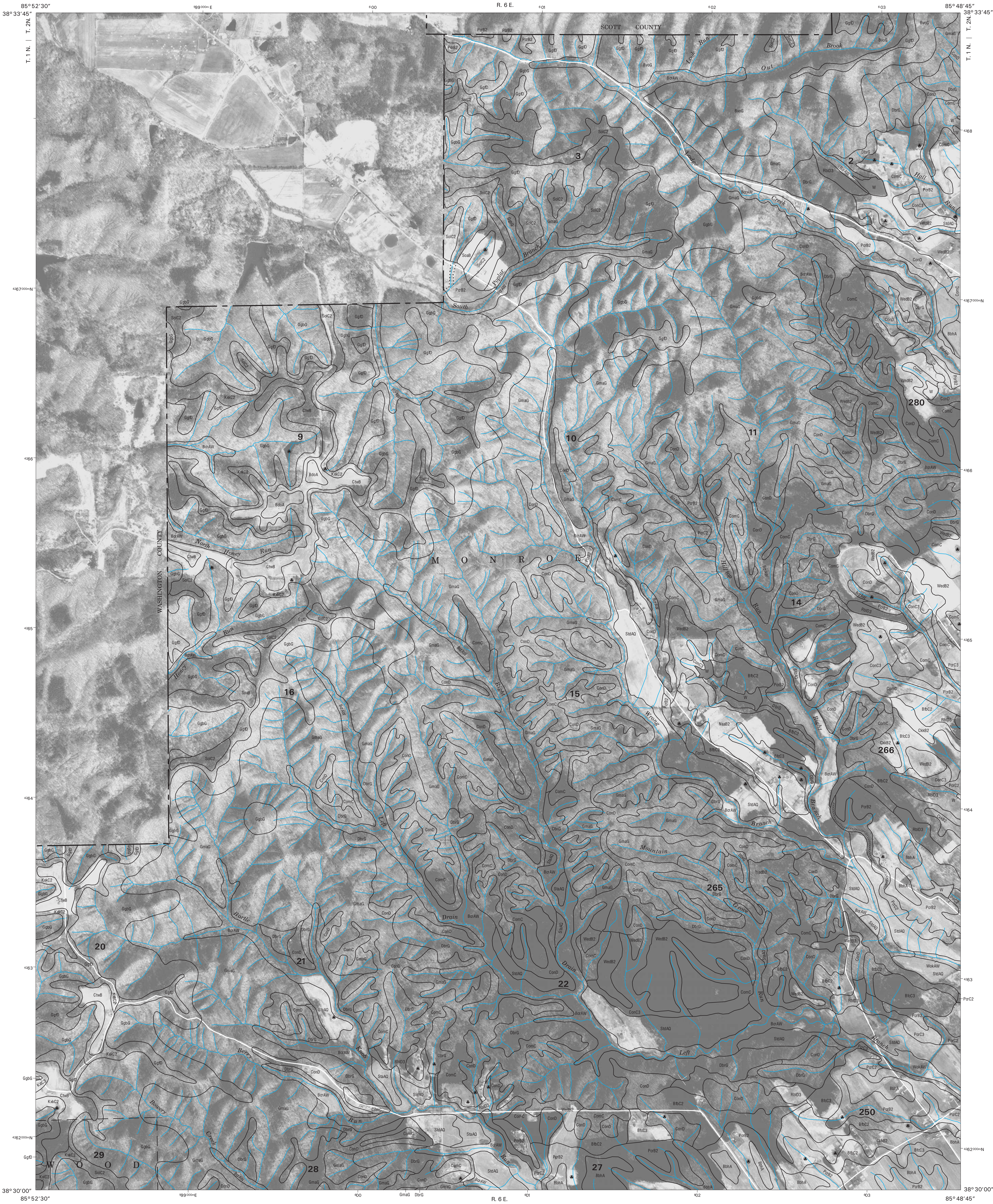
1 SOUTH BOSTON NW (WASHINGTON COUNTY)
2 SOUTH BOSTON NE (SCOTT AND WASHINGTON COUNTIES)
3 HENRYVILLE NW (SHEET 1)
4 SOUTH BOSTON SW (SHEET 9)
5 HENRYVILLE SW (SHEET 11)
6 BORDEN NW (SHEET 19)
7 BORDEN NE (SHEET 20)
8 SPEED NW (SHEET 21)

INDEX TO ADJOINING 3.75 MAPS

SOUTH BOSTON SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
HENRYVILLE SW QUADRANGLE
SHEET NUMBER 11 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

1	2	3
4		5
6	7	8

1 SOUTH BOSTON NE (SCOTT AND WASHINGTON CO.)
2 HENRYVILLE NW (SHEET 1)
3 HENRYVILLE NE (SHEET 2)
4 SOUTH BOSTON SE (SHEET 10)
5 HENRYVILLE SE (SHEET 12)
6 BORDEN NE (SHEET 20)
7 SPEED NW (SHEET 21)
8 SPEED NE (SHEET 22)

INDEX TO ADJOINING 3.75 MAPS

HENRYVILLE SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 11 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
HENRYVILLE SE QUADRANGLE
SHEET NUMBER 12 OF 40

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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

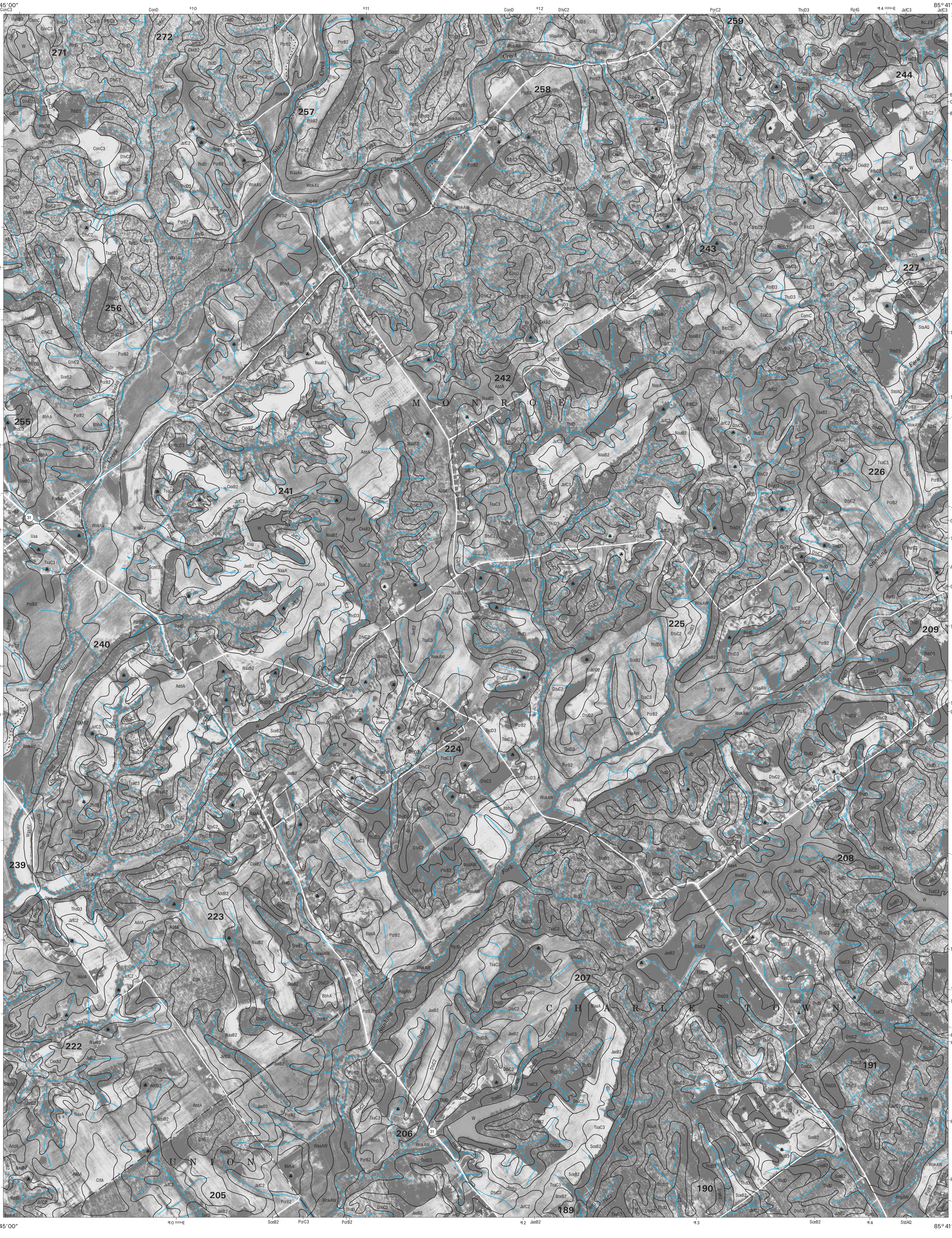
0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 HENRYVILLE NW (SHEET 1)
2 HENRYVILLE NE (SHEET 2)
3 OTISCO NW (SHEET 3)
4 HENRYVILLE SW (SHEET 11)
5 OTISCO SW (SHEET 13)
6 SPEED NW (SHEET 21)
7 SPEED NE (SHEET 22)
8 CHARLESTOWN NW (SHEET 23)

INDEX TO ADJOINING 3.75 MAPS

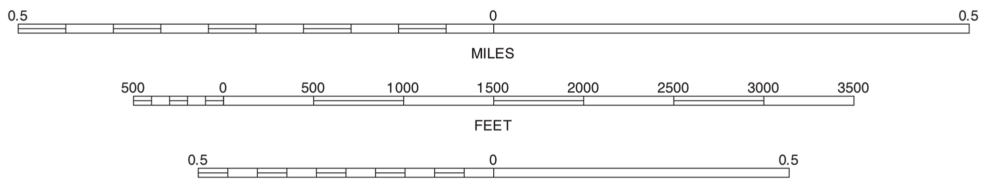
HENRYVILLE SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 12 OF 40



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION



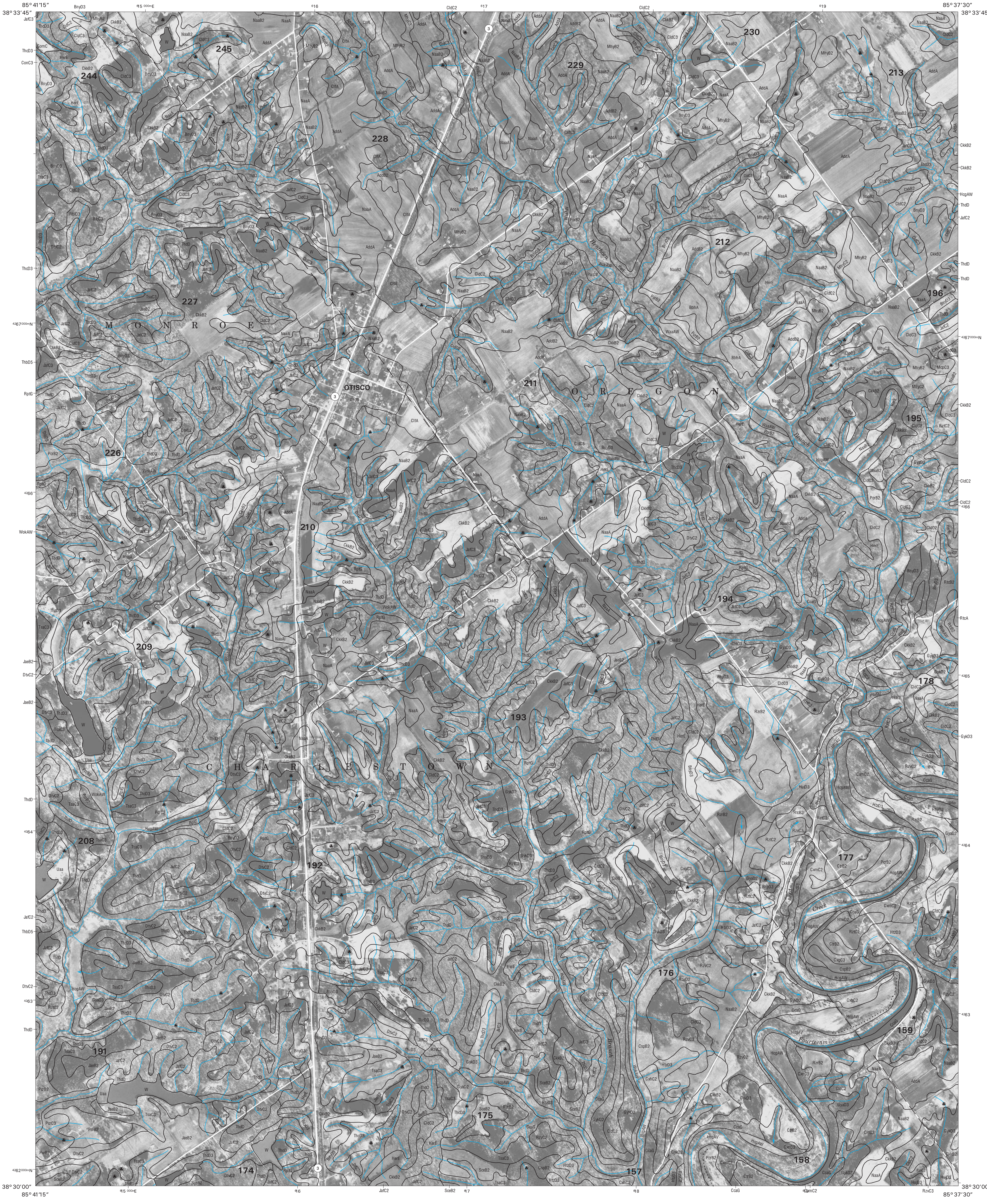
1	2	3
4		5
6	7	8

1 HENRYVILLE NE (SHEET 2)
2 OTISCO NW (SHEET 3)
3 OTISCO NE (SHEET 4)
4 HENRYVILLE SE (SHEET 12)
5 OTISCO SE (SHEET 14)
6 SPEED NE (SHEET 22)
7 CHARLESTOWN NW (SHEET 23)
8 CHARLESTOWN NE (SHEET 24)

INDEX TO ADJOINING 3.75 MAPS

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OTISCO SE QUADRANGLE
SHEET NUMBER 14 OF 40



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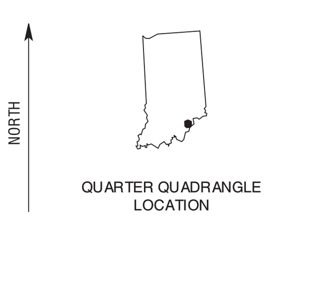
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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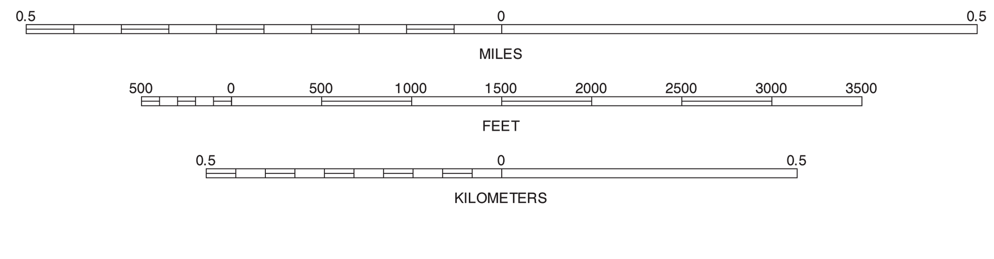


1	2	3
4		5
6	7	8

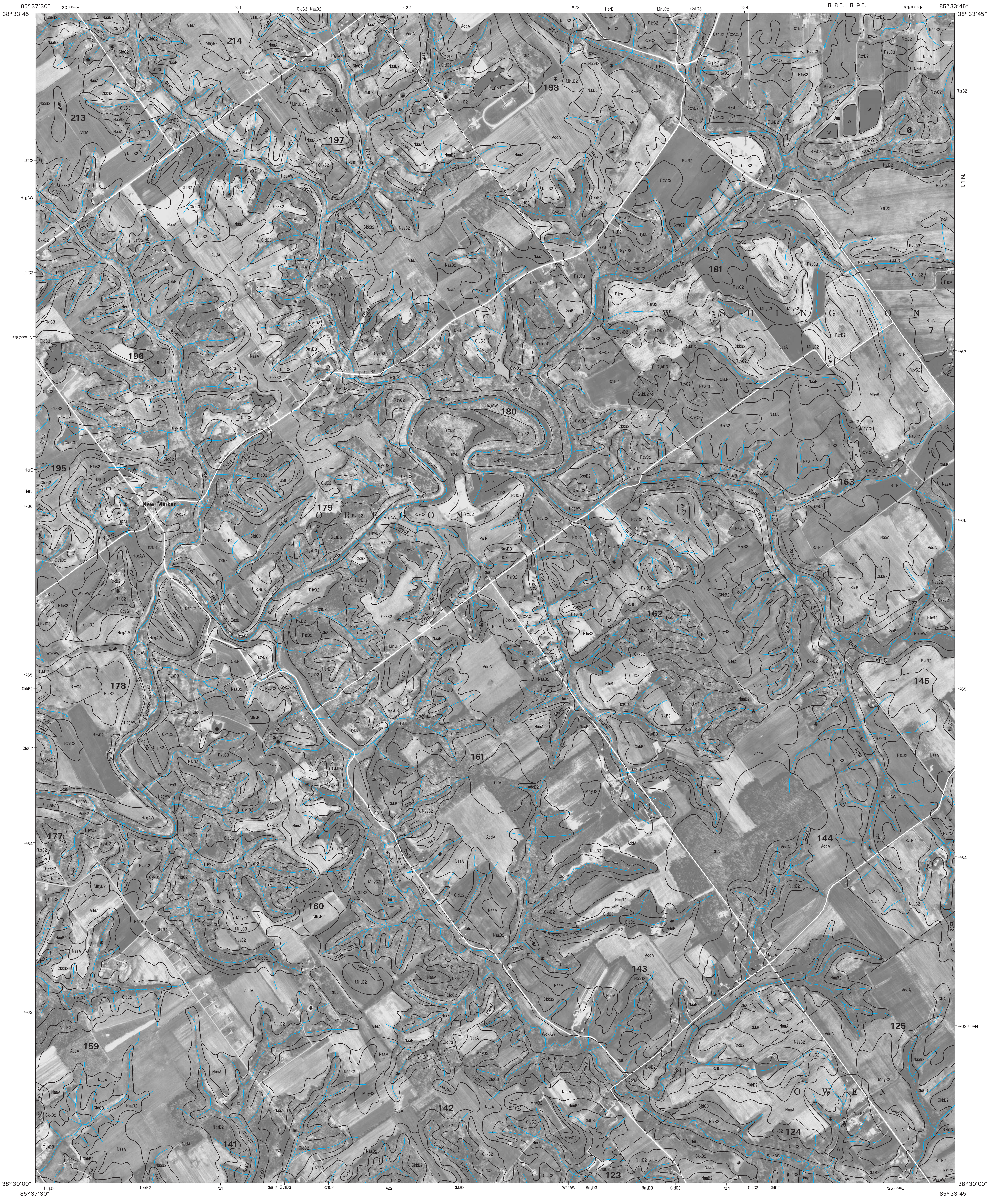
1 OTISCO NW (SHEET 3)
2 OTISCO NE (SHEET 4)
3 NEW WASHINGTON NW (SHEET 5)
4 OTISCO SW (SHEET 13)
5 NEW WASHINGTON SW (SHEET 15)
6 CHARLESTOWN NW (SHEET 23)
7 CHARLESTOWN NE (SHEET 24)
8 OWEN NW (SHEET 25)

INDEX TO ADJOINING 3.75 MAPS

OTISCO SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
NEW WASHINGTON SW QUADRANGLE
SHEET NUMBER 15 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 OTISCO NE (SHEET 4)
2 NEW WASHINGTON NW (SHEET 5)
3 NEW WASHINGTON NE (SHEET 6)
4 OTISCO SE (SHEET 14)
5 NEW WASHINGTON SE (SHEET 16)
6 CHARLESTOWN NE (SHEET 24)
7 OWEN NW (SHEET 25)
8 OWEN NE (SHEET 26)

INDEX TO ADJOINING 3.75 MAPS

NEW WASHINGTON SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 15 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
NEW WASHINGTON SE QUADRANGLE
SHEET NUMBER 16 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

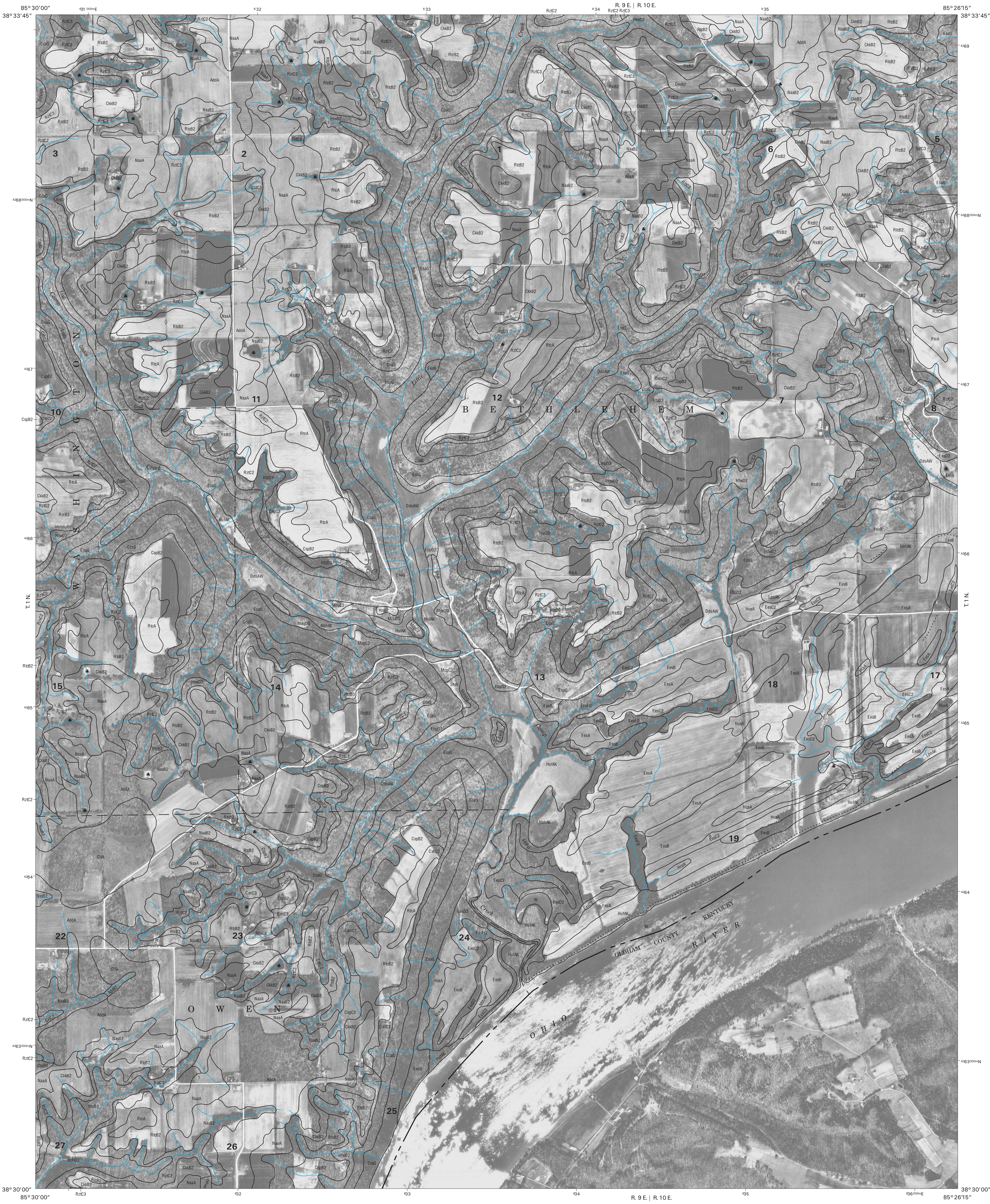
1 NEW WASHINGTON NW (SHEET 5)
2 NEW WASHINGTON NE (SHEET 6)
3 BETHLEHEM NW (SHEET 7)
4 NEW WASHINGTON SW (SHEET 15)
5 BETHLEHEM SW (SHEET 17)
6 OWEN NW (SHEET 25)
7 OWEN NE (SHEET 26)
8 LA GRANGE NW (SHEET 27)

INDEX TO ADJOINING 3.75 MAPS

NEW WASHINGTON SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 16 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BETHLEHEM SW QUADRANGLE
SHEET NUMBER 17 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

1	2	3
4		5
6	7	8

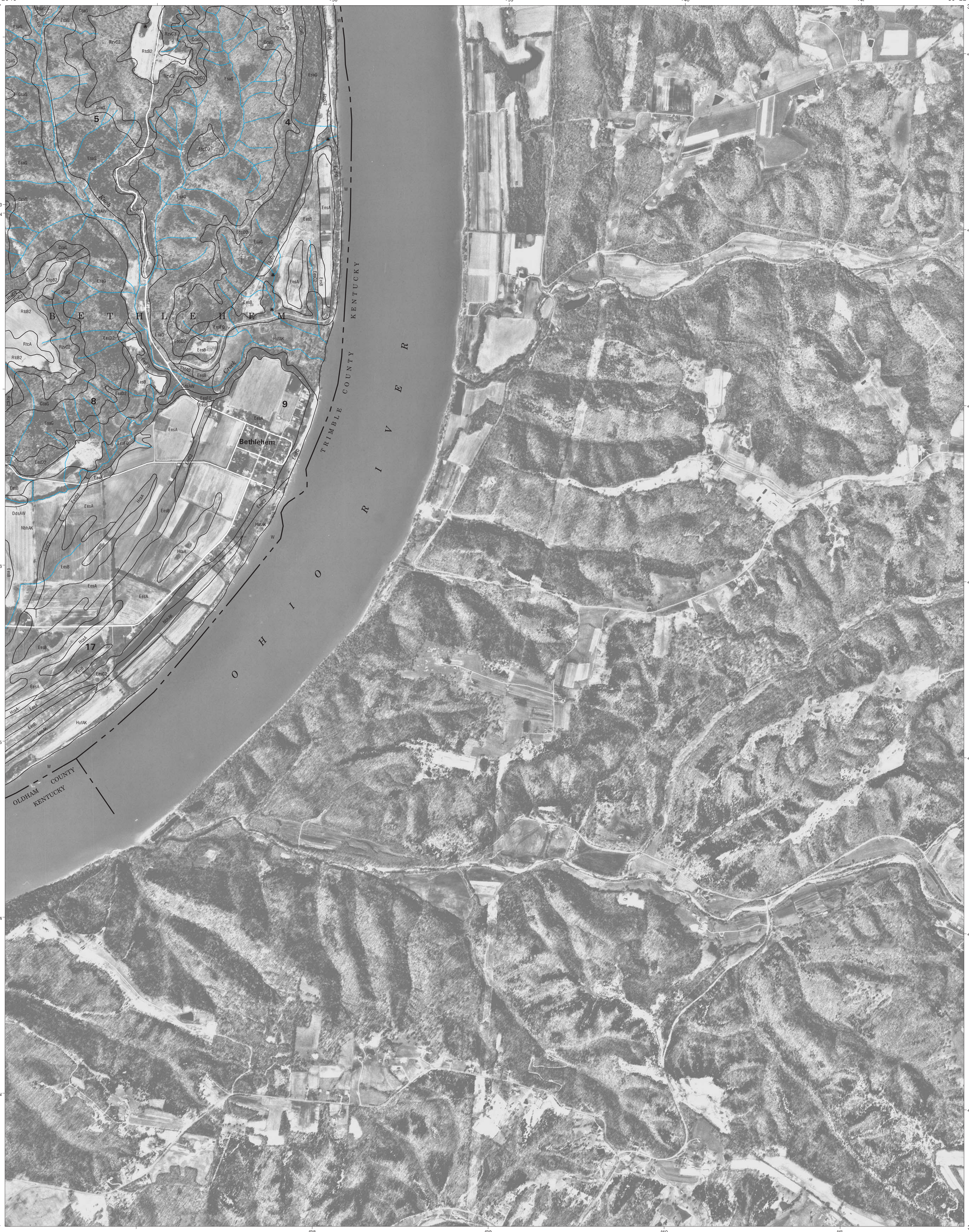
1 NEW WASHINGTON NE (SHEET 6)
2 BETHLEHEM NW (SHEET 7)
3 BETHLEHEM NE (SHEET 8)
4 NEW WASHINGTON SE (SHEET 16)
5 BETHLEHEM SE (SHEET 18)
6 OWEN NE (SHEET 26)
7 LA GRANGE NW (SHEET 27)
8 LA GRANGE NE (OLDHAM COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

BETHLEHEM SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 17 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BETHLEHEM SE QUADRANGLE
SHEET NUMBER 18 OF 40



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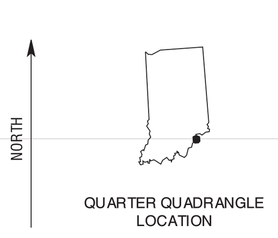
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

1	2	3
4		5
6	7	8

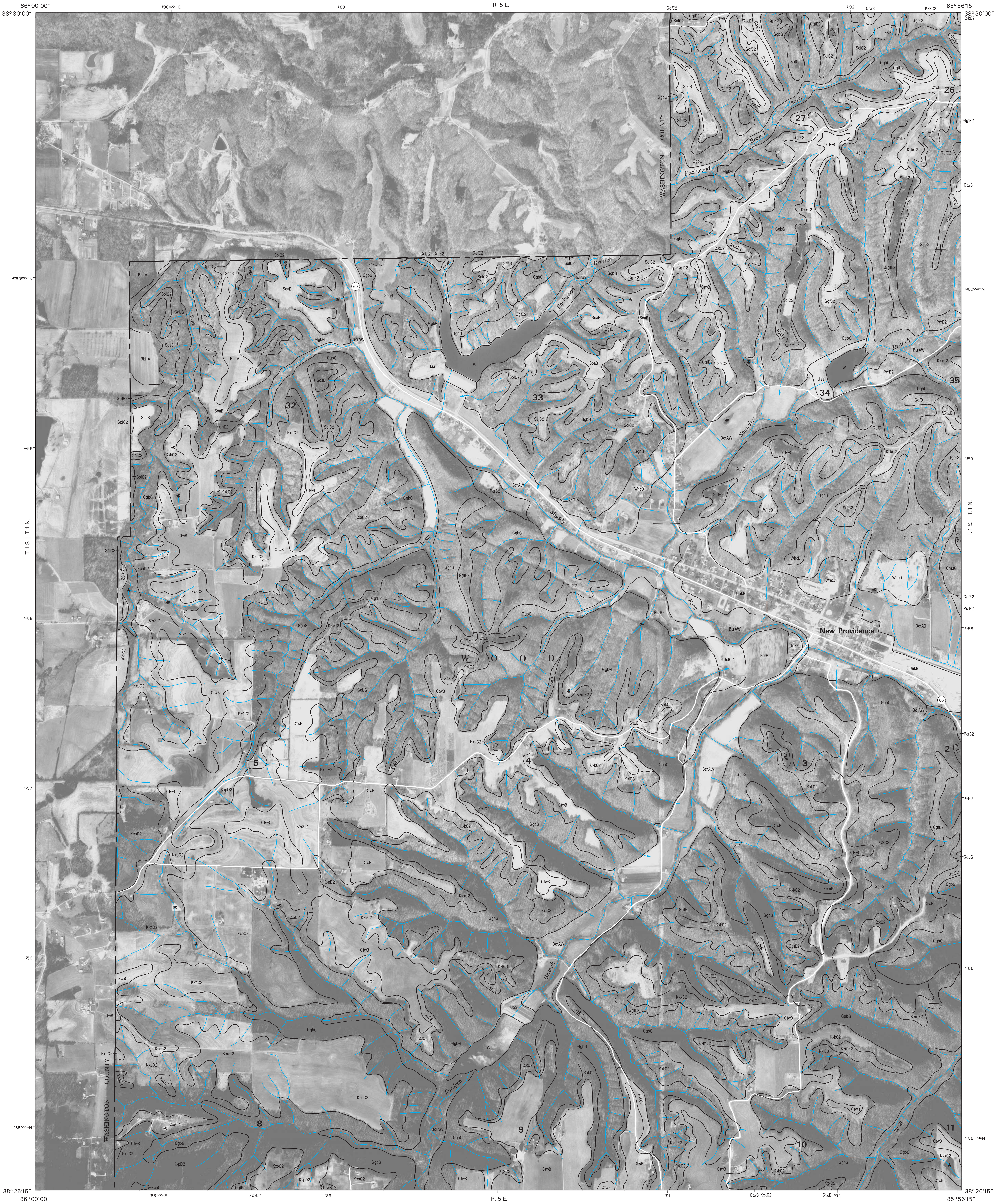
1 BETHLEHEM NW (SHEET 7)
2 BETHLEHEM NE (SHEET 8)
3 BEDFORD NW (TRIMBLE COUNTY, KY)
4 BETHLEHEM SW (SHEET 17)
5 BEDFORD SW (OLDHAM CO. & TRIMBLE CO., KY)
6 LA GRANGE NW (SHEET 27)
7 LAGRANGE NE (OLDHAM COUNTY, KY)
8 SMITHFIELD NW (OLDHAM COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

BETHLEHEM SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 18 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BORDEN NW QUADRANGLE
SHEET NUMBER 19 OF 40



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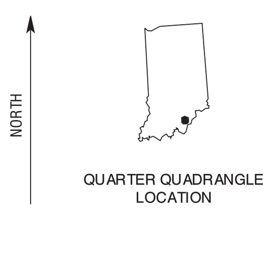
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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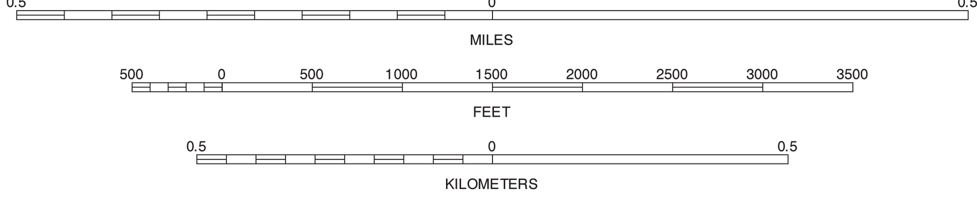
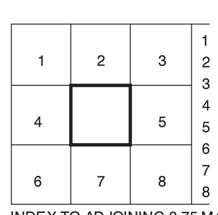
SCALE 1:12000





1 SALEM SE (WASHINGTON COUNTY)
2 SOUTH BOSTON SW (SHEET 9)
3 SOUTH BOSTON SE (SHEET 10)
4 PALMYRA NE (WASHINGTON COUNTY)
5 BORDEN NE (SHEET 20)
6 PALMYRA SE (FLOYD AND WASHINGTON COUNTIES)
7 BORDEN SW (SHEET 28)
8 BORDEN SE (SHEET 29)

INDEX TO ADJOINING 3.75 MAPS

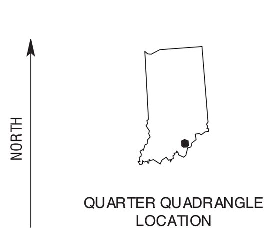
BORDEN NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 19 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BORDEN NE QUADRANGLE
SHEET NUMBER 20 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

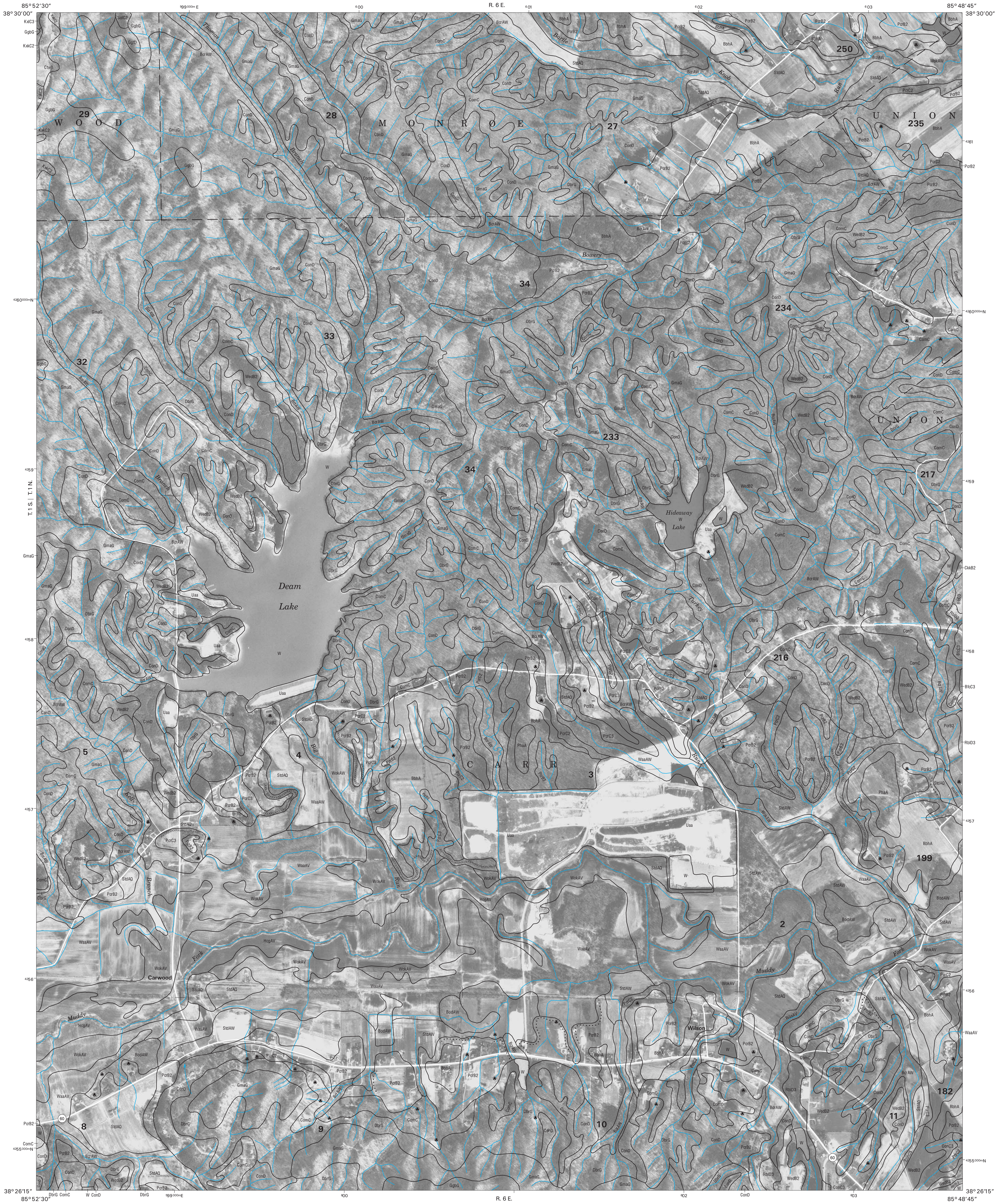
1 SOUTH BOSTON SW (SHEET 9)
2 SOUTH BOSTON SE (SHEET 10)
3 HENRYVILLE SW (SHEET 11)
4 BORDEN NW (SHEET 19)
5 SPEED NW (SHEET 21)
6 BORDEN SW (SHEET 28)
7 BORDEN SE (SHEET 29)
8 SPEED SW (SHEET 30)

INDEX TO ADJOINING 3.75 MAPS

BORDEN NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 20 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SPEED NW QUADRANGLE
SHEET NUMBER 21 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

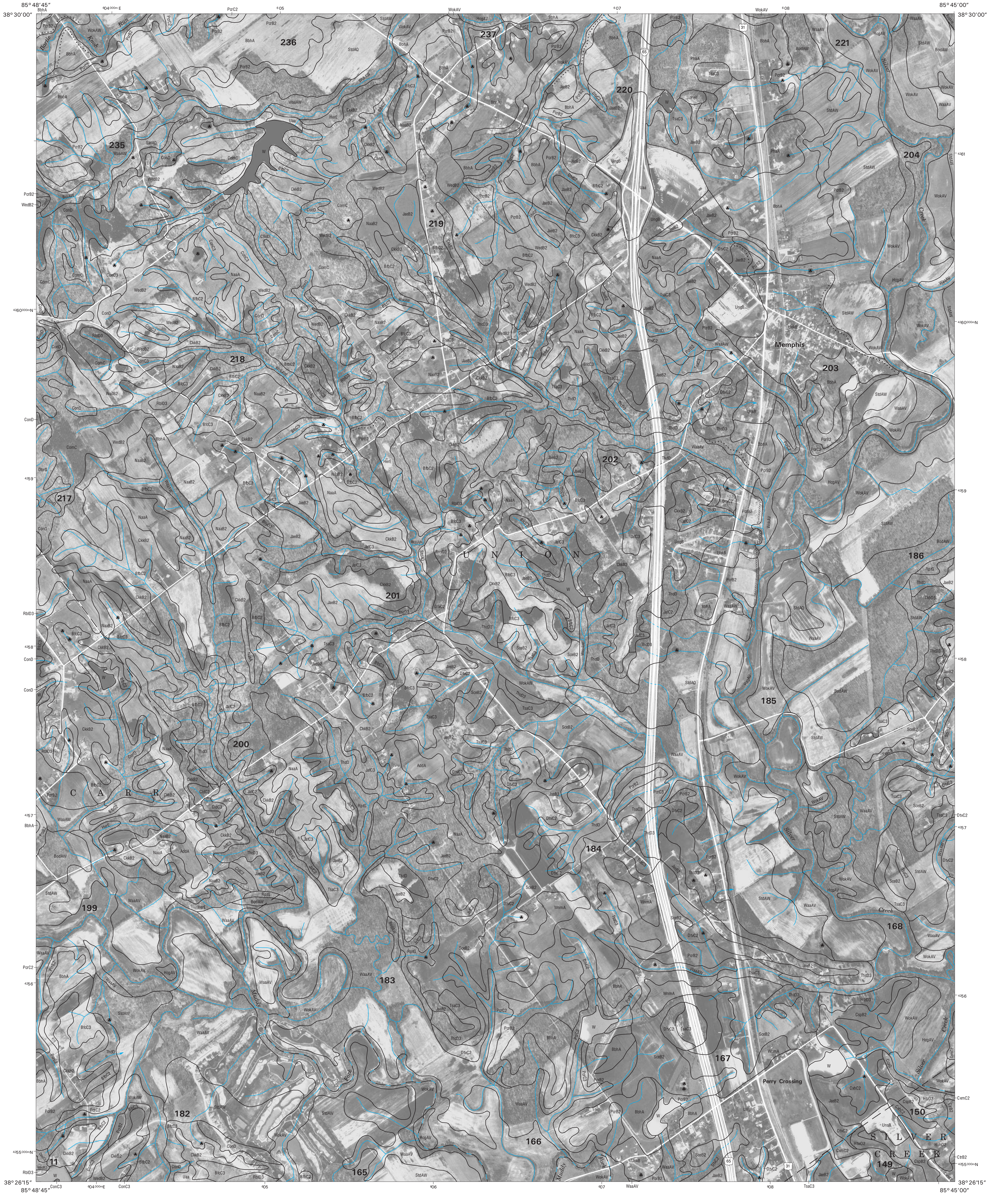
1 SOUTH BOSTON SE (SHEET 10)
2 HENRYVILLE SW (SHEET 11)
3 HENRYVILLE SE (SHEET 12)
4 BORDEN NE (SHEET 20)
5 SPEED NE (SHEET 22)
6 BORDEN SE (SHEET 29)
7 SPEED SW (SHEET 30)
8 SPEED SE (SHEET 31)

INDEX TO ADJOINING 3.75 MAPS

SPEED NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 21 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SPEED NE QUADRANGLE
SHEET NUMBER 22 OF 40



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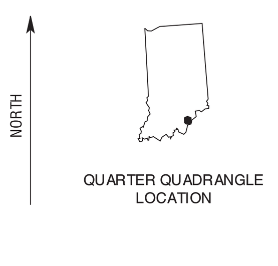
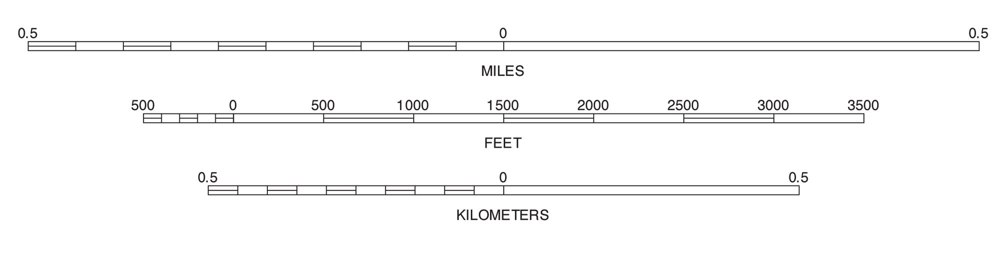
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

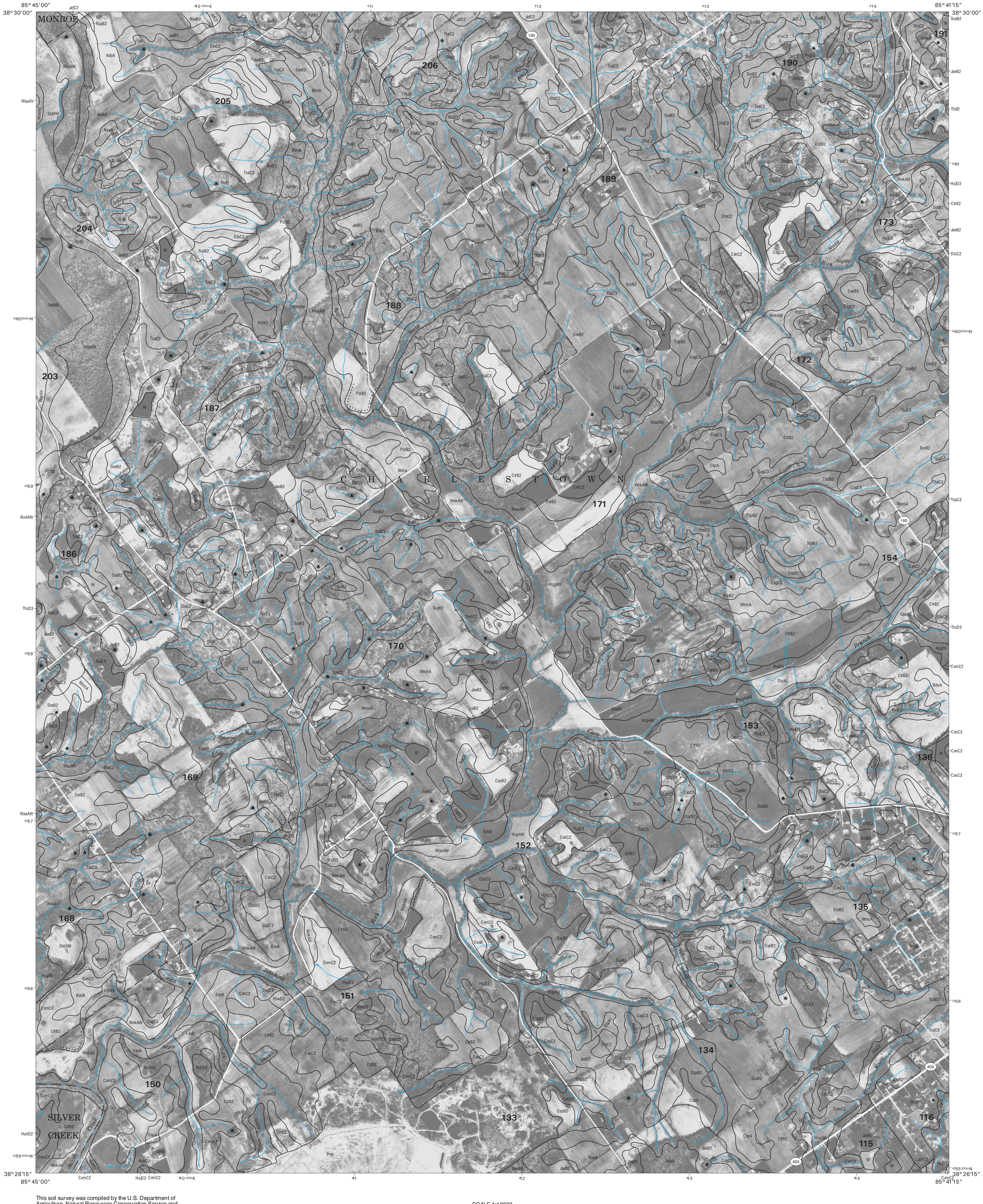


1	2	3
4		5
6	7	8

1 HENRYVILLE SW (SHEET 11)
2 HENRYVILLE SE (SHEET 12)
3 OTISCO SW (SHEET 13)
4 SPEED NW (SHEET 21)
5 CHARLESTOWN NW (SHEET 23)
6 SPEED SW (SHEET 30)
7 SPEED SE (SHEET 31)
8 CHARLESTOWN SW (SHEET 32)

INDEX TO ADJOINING 3.75 MAPS

SPEED NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 40



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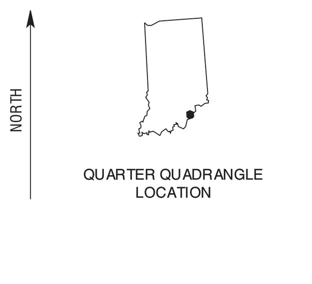
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

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MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

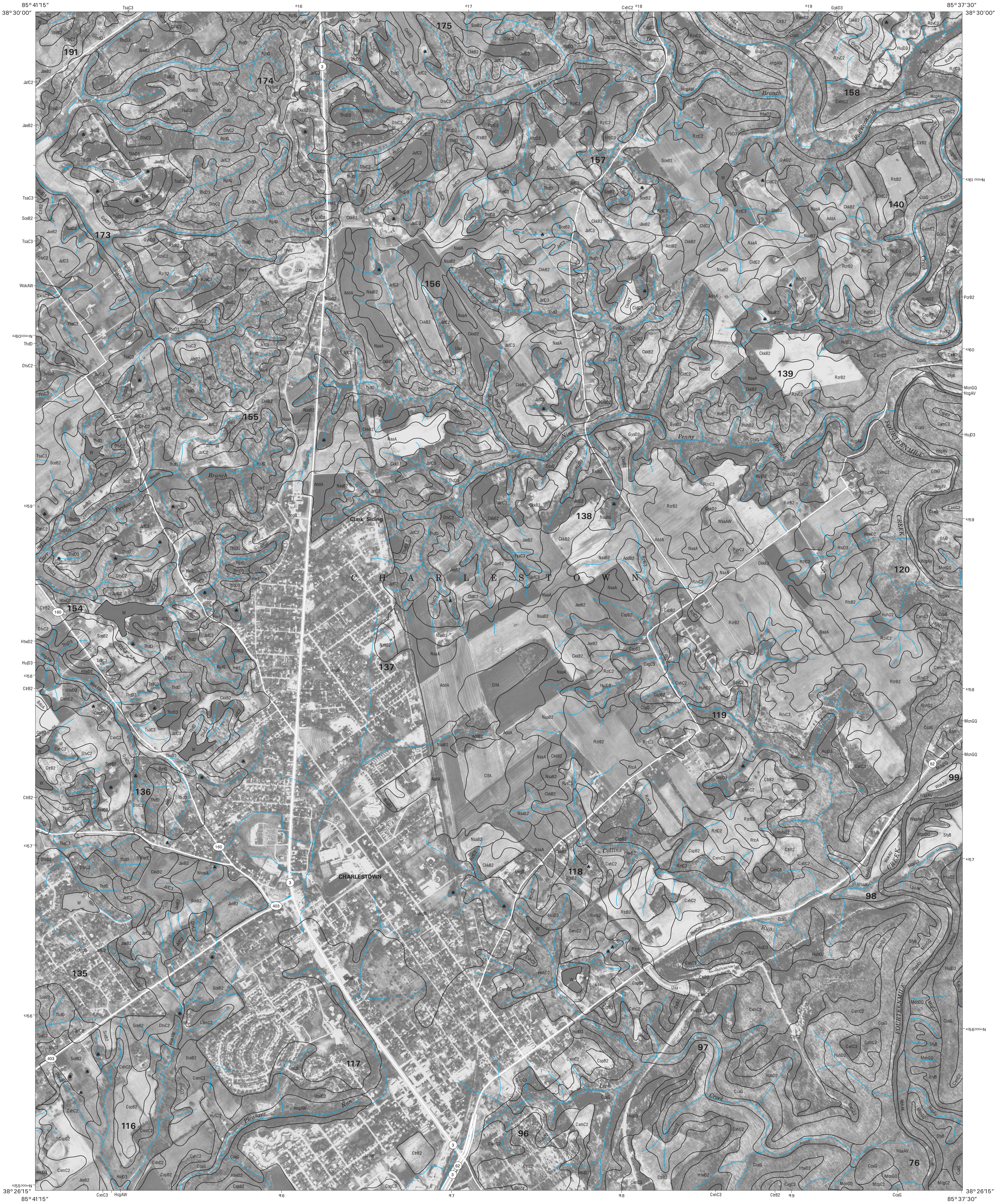
1 HENRYVILLE SE (SHEET 12)
2 OTISCO SW (SHEET 13)
3 OTISCO SE (SHEET 14)
4 SPEED NE (SHEET 22)
5 CHARLESTOWN NE (SHEET 24)
6 SPEED SE (SHEET 31)
7 CHARLESTOWN SW (SHEET 32)
8 CHARLESTOWN SE (SHEET 33)

INDEX TO ADJOINING 3.75 MAPS

CHARLESTOWN NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 23 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
CHARLESTOWN NE QUADRANGLE
SHEET NUMBER 24 OF 40



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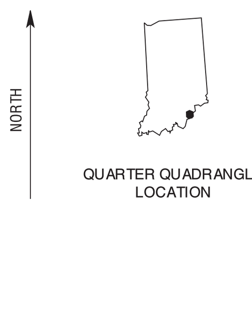
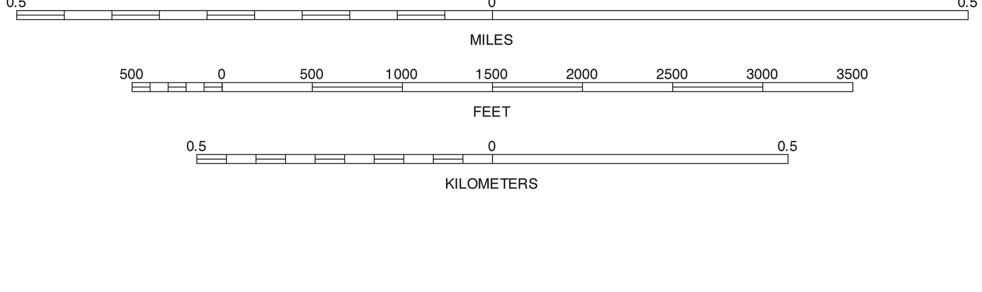
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

1 OTISCO SW (SHEET 13)
2 OTISCO SE (SHEET 14)
3 NEW WASHINGTON SW (SHEET 15)
4 CHARLESTOWN NW (SHEET 23)
5 OWEN NW (SHEET 25)
6 CHARLESTOWN SW (SHEET 32)
7 CHARLESTOWN SE (SHEET 33)
8 OWEN SW (SHEET 34)

INDEX TO ADJOINING 3.75 MAPS

CHARLESTOWN NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 24 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OWEN NW QUADRANGLE
SHEET NUMBER 25 OF 40

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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 OTISCO SE (SHEET 14)
2 NEW WASHINGTON SW (SHEET 15)
3 NEW WASHINGTON SE (SHEET 16)
4 CHARLESTOWN NE (SHEET 24)
5 OWEN NE (SHEET 26)
6 CHARLESTOWN SE (SHEET 33)
7 OWEN SW (SHEET 34)
8 OWEN SE (OLDHAM COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

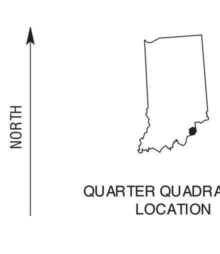
OWEN NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OWEN NE QUADRANGLE
SHEET NUMBER 26 OF 40

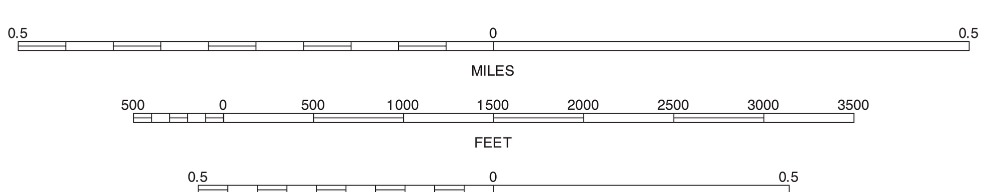
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

1 NEW WASHINGTON SW (SHEET 15)
2 NEW WASHINGTON SE (SHEET 16)
3 BETHLEHEM SW (SHEET 17)
4 OWEN NW (SHEET 25)
5 LA GRANGE NW (SHEET 27)
6 OWEN SW (SHEET 34)
7 OWEN SE (OLDHAM COUNTY, KY)
8 LA GRANGE SW (OLDHAM COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

OWEN NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
LA GRANGE NW QUADRANGLE
SHEET NUMBER 27 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1 NEW WASHINGTON SE (SHEET 16)
2 BETHLEHEM SW (SHEET 17)
3 BETHLEHEM SE (SHEET 18)
4 OWEN NE (SHEET 26)
5 LA GRANGE NE (OLDHAM COUNTY, KY)
6 OWEN SE (OLDHAM COUNTY, KY)
7 LA GRANGE SW (OLDHAM COUNTY, KY)
8 LA GRANGE SE (OLDHAM COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

LA GRANGE NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

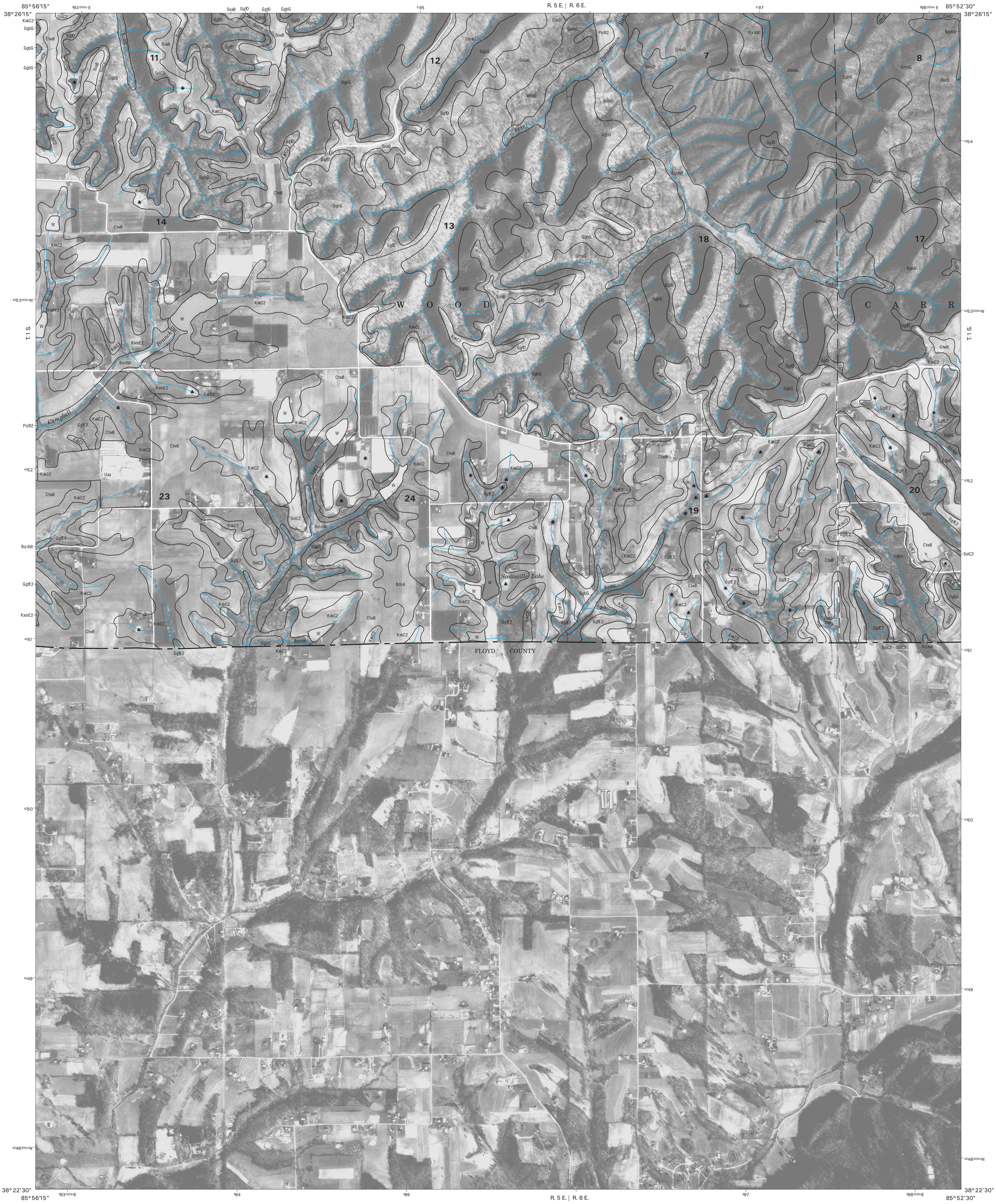
1 PALMYRA NE (WASHINGTON COUNTY)
2 BORDEN NW (SHEET 19)
3 BORDEN NE (SHEET 20)
4 PALMYRA SE (FLOYD AND WASHINGTON COUNTIES)
5 BORDEN SE (SHEET 29)
6 CRANDALL NE (FLOYD COUNTY)
7 GEORGETOWN NW (FLOYD COUNTY)
8 GEORGETOWN NE (FLOYD COUNTY)

INDEX TO ADJOINING 3.75 MAPS

BORDEN SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
BORDEN SE QUADRANGLE
SHEET NUMBER 29 OF 40



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES 0.5 0 0.5

FEET 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS 0.5 0 0.5

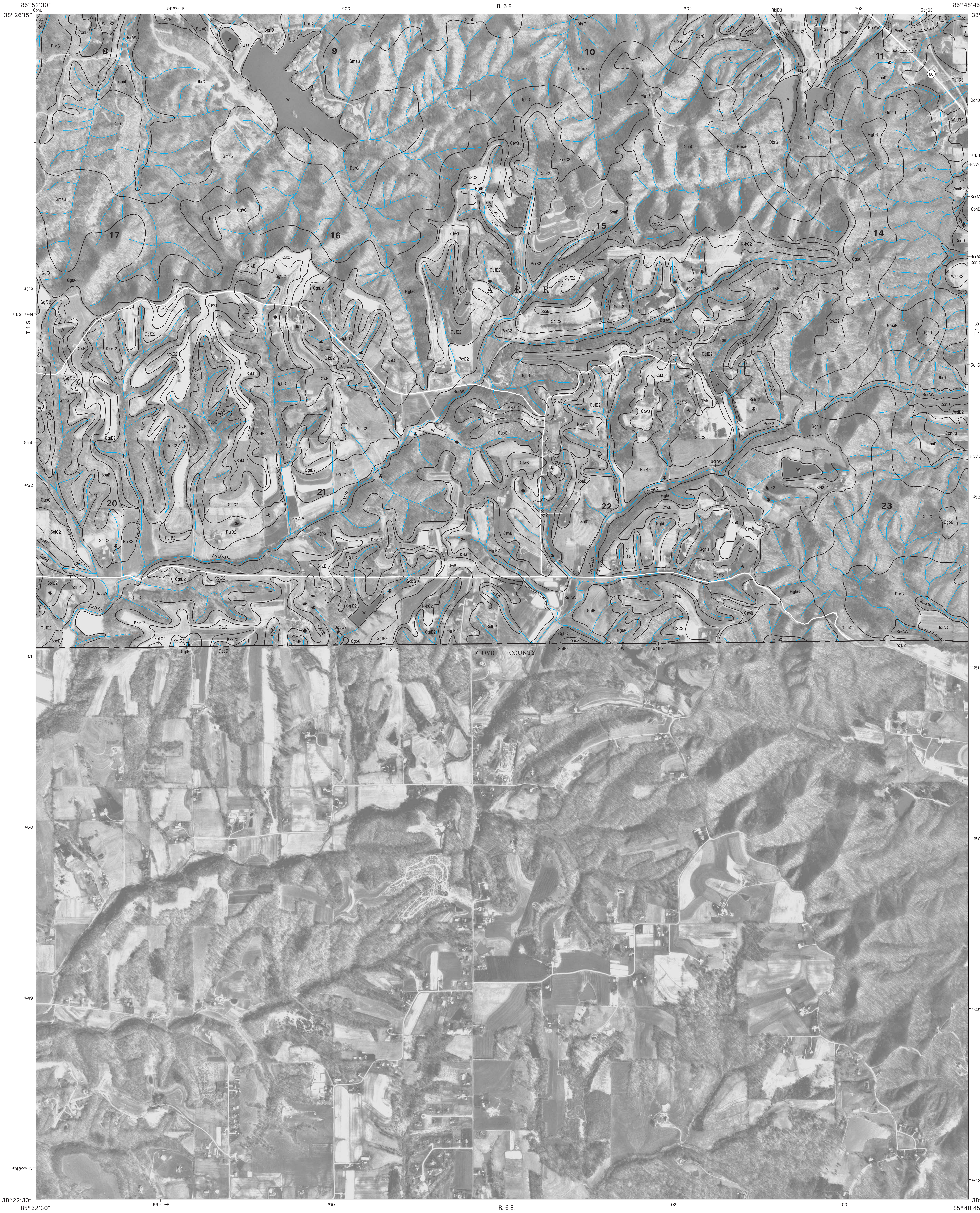
1 BORDEN NW (SHEET 19)
2 BORDEN NE (SHEET 20)
3 SPEED NW (SHEET 21)
4 BORDEN SW (SHEET 28)
5 SPEED SW (SHEET 30)
6 GEORGETOWN NW (FLOYD COUNTY)
7 GEORGETOWN NE (FLOYD COUNTY)
8 NEW ALBANY NW (FLOYD COUNTY)

INDEX TO ADJOINING 3.75 MAPS

BORDEN SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SPEED SW QUADRANGLE
SHEET NUMBER 30 OF 40



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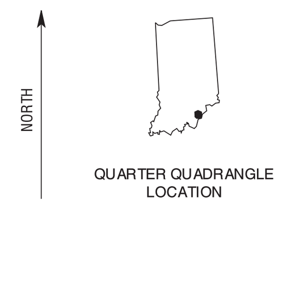
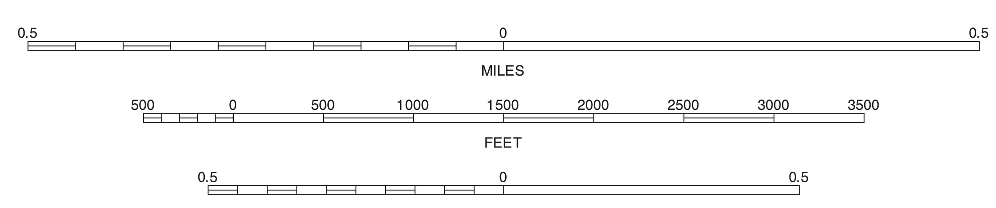


QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

1 BORDEN NE (SHEET 20)
2 SPEED NW (SHEET 21)
3 SPEED NE (SHEET 22)
4 BORDEN SE (SHEET 29)
5 SPEED SE (SHEET 31)
6 GEORGETOWN NE (FLOYD COUNTY)
7 NEW ALBANY NW (FLOYD COUNTY)
8 NEW ALBANY NE (SHEET 35)

INDEX TO ADJOINING 3.75 MAPS

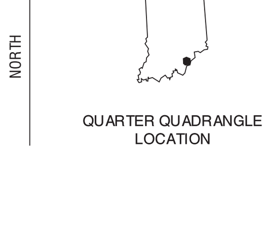
SPEED SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 30 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
SPEED SE QUADRANGLE
SHEET NUMBER 31 OF 40

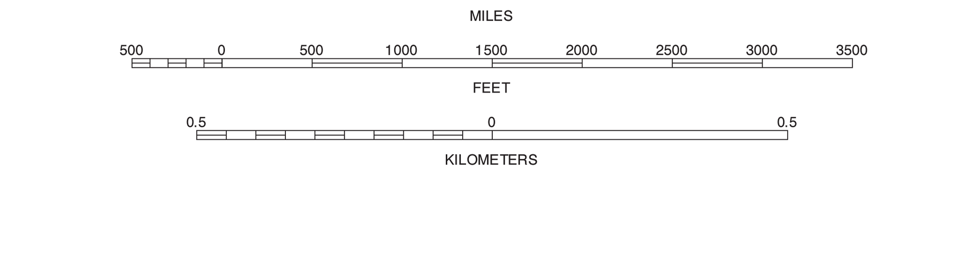
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

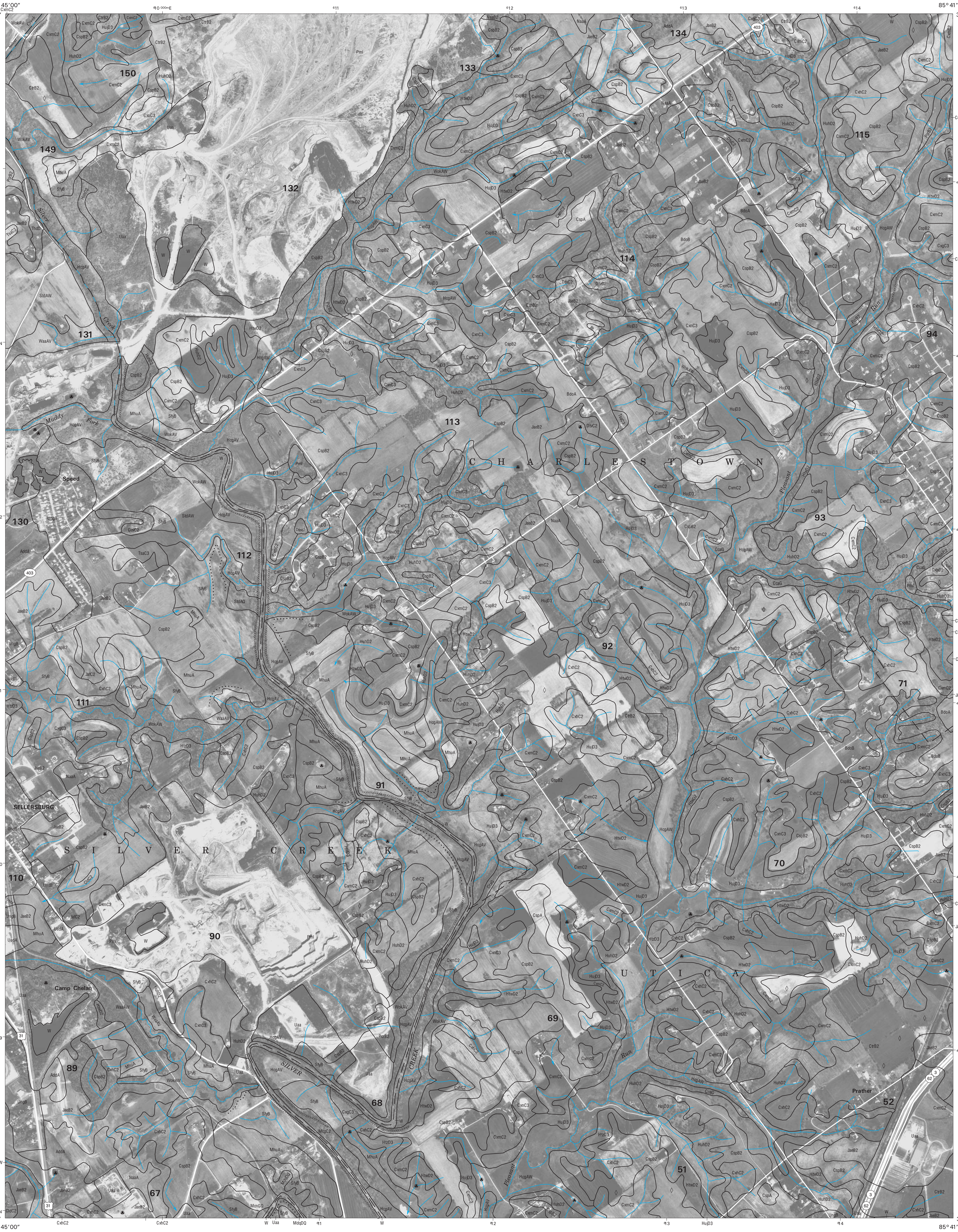
1 SPEED NW (SHEET 21)
2 SPEED NE (SHEET 22)
3 CHARLESTOWN NW (SHEET 23)
4 SPEED SW (SHEET 30)
5 CHARLESTOWN SW (SHEET 32)
6 NEW ALBANY NW (FLOYD COUNTY)
7 NEW ALBANY NE (SHEET 35)
8 JEFFERSONVILLE NW (SHEET 36)

INDEX TO ADJOINING 3.75 MAPS

SPEED SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 31 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
CHARLESTOWN SW QUADRANGLE
SHEET NUMBER 32 OF 40



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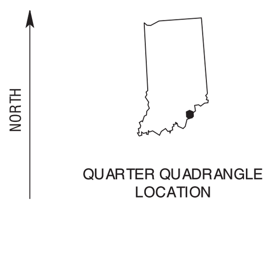
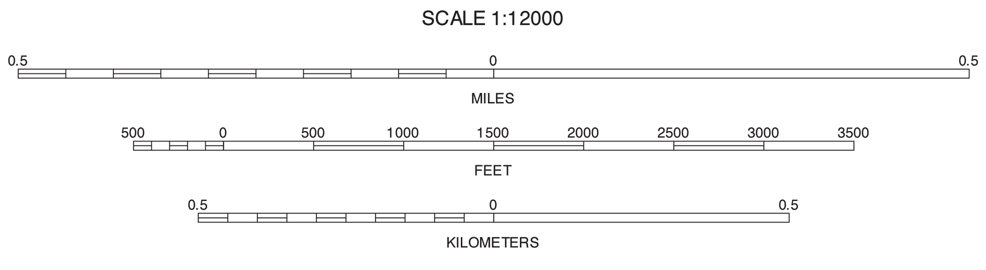
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

1 SPEED NE (SHEET 22)
2 CHARLESTOWN NW (SHEET 23)
3 CHARLESTOWN NE (SHEET 24)
4 SPEED SE (SHEET 31)
5 CHARLESTOWN SE (SHEET 33)
6 NEW ALBANY NE (SHEET 35)
7 JEFFERSONVILLE NW (SHEEET 36)
8 JEFFERSONVILLE NE (SHEET 37)

INDEX TO ADJOINING 3.75 MAPS

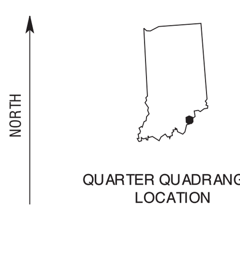
CHARLESTOWN SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
CHARLESTOWN SE QUADRANGLE
SHEET NUMBER 33 OF 40

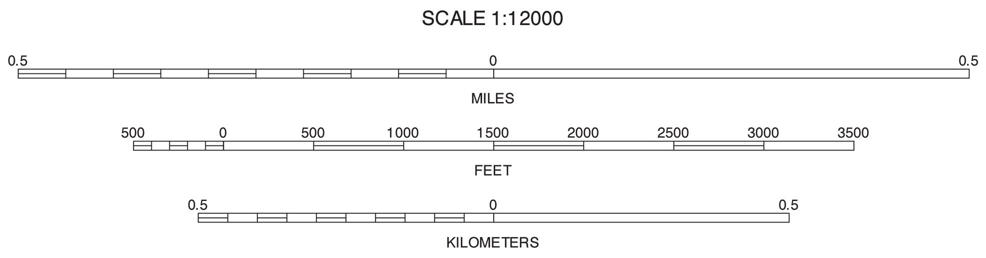
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

1 CHARLESTOWN NW (SHEET 23)
2 CHARLESTOWN NE (SHEET 24)
3 OWEN NW (SHEET 25)
4 CHARLESTOWN SW (SHEET 32)
5 OWEN SW (SHEET 34)
6 JEFFERSONVILLE NW (SHEET 36)
7 JEFFERSONVILLE NE (SHEET 37)
8 ANCHORAGE NW (JEFFERSON CO. AND OLDHAM CO., KY)

INDEX TO ADJOINING 3.75 MAPS

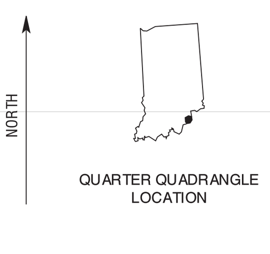
CHARLESTOWN SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 33 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
OWEN SW QUADRANGLE
SHEET NUMBER 34 OF 40

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

1	2	3
4		5
6	7	8

1 CHARLESTOWN NE (SHEET 24)
2 OWEN NW (SHEET 25)
3 OWEN NE (SHEET 26)
4 CHARLESTOWN SE (SHEET 33)
5 OWEN SE (OLDHAM COUNTY, KY)
6 JEFFERSONVILLE NE (SHEET 37)
7 ANCHORAGE NW (OLDHAM CO. AND JEFFERSON CO., KY)
8 ANCHORAGE NE (OLDHAM CO. AND JEFFERSON CO., KY)

INDEX TO ADJOINING 3.75 MAPS

OWEN SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 34 OF 40

85° 48′45″
38° 22′30″

85° 45′00″
38° 22′30″

38°18′45″
85° 48′45″

38°18′45″
85° 45′00″

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

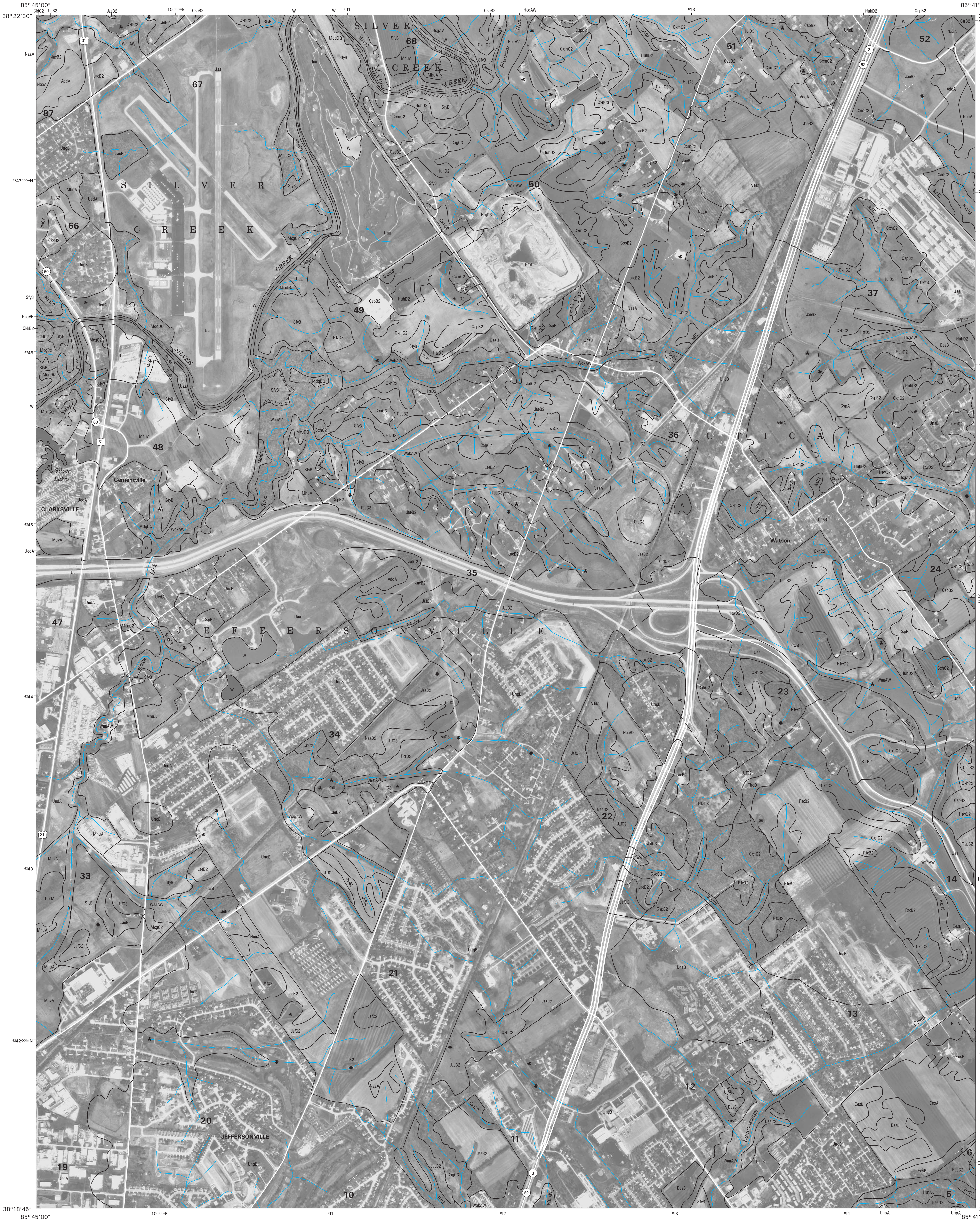
1	2	3
4		5
6	7	8

1 SPEED SW (SHEET 30)
2 SPEED SE (SHEET 31)
3 CHARLESTOWN SW (SHEET 32)
4 NEW ALBANY NW (FLOYD COUNTY)
5 JEFFERSONVILLE NW (SHEET 36)
6 NEW ALBANY SW (FLOYD COUNTY)
7 NEW ALBANY SE (SHEET 38)
8 JEFFERSONVILLE SW (SHEET 39)

INDEX TO ADJOINING 3.75 MAPS

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
JEFFERSONVILLE NW QUADRANGLE
SHEET NUMBER 36 OF 40



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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 SPEED SE (SHEET 31)
2 CHARLESTOWN SW (SHEET 32)
3 CHARLESTOWN SE (SHEET 33)
4 NEW ALBANY NE (SHEET 35)
5 JEFFERSONVILLE NE (SHEET 37)
6 NEW ALBANY SE (SHEET 38)
7 JEFFERSONVILLE SW (SHEET 39)
8 JEFFERSONVILLE SE (SHEET 40)

INDEX TO ADJOINING 3.75 MAPS

JEFFERSONVILLE NW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 36 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
JEFFERSONVILLE NE QUADRANGLE
SHEET NUMBER 37 OF 40

85° 41′15″
38° 22′30″

85° 37′30″
38° 22′30″

38°18′45″
85° 41′15″

38°18′45″
85° 37′30″

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NORTH

QUADRANGLE QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

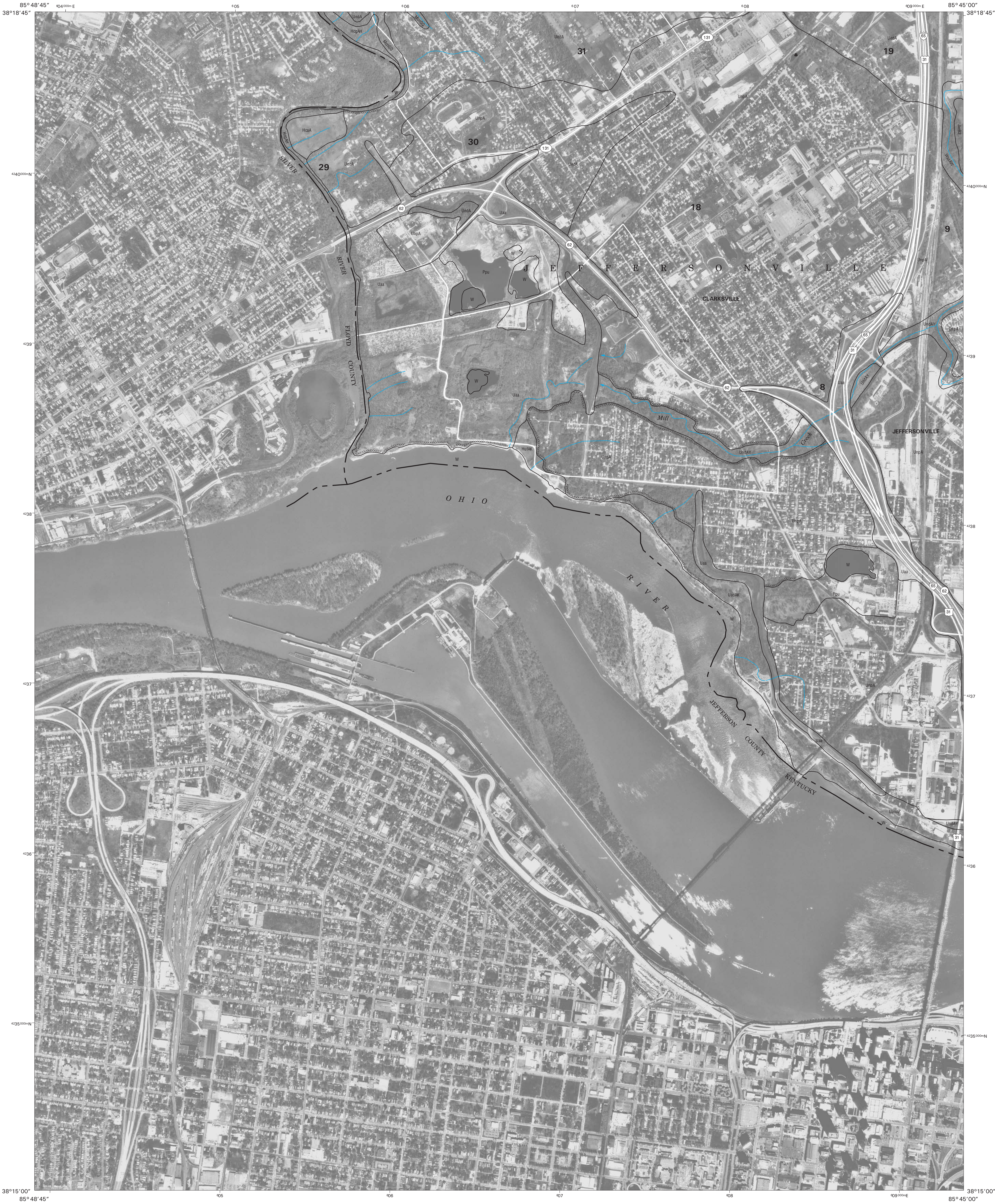
1	2	3
4		5
6	7	8

1 CHARLESTOWN SW (SHEET 32)
2 CHARLESTOWN SE (SHEET 33)
3 OWEN SW (SHEET 34)
4 JEFFERSONVILLE NW (SHEET 36)
5 ANCHORAGE NW (JEFFERSON CO. AND OLDHAM CO., KY)
6 JEFFERSONVILLE SW (SHEET 39)
7 JEFFERSONVILLE SE (SHEET 40)
8 ANCHORAGE SW (JEFFERSON CO. AND OLDHAM CO., KY)

INDEX TO ADJOINING 3.75 MAPS

JEFFERSONVILLE NE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 37 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 NEW ALBANY NW (FLOYD COUNTY)
2 NEW ALBANY NE (SHEET 35)
3 JEFFERSONVILLE NW (SHEET 36)
4 NEW ALBANY SW (FLOYD COUNTY)
5 JEFFERSONVILLE SW (SHEET 39)
6 LOUISVILLE WEST NW (JEFFERSON COUNTY, KY)
7 LOUISVILLE WEST NE (JEFFERSON COUNTY, KY)
8 LOUISVILLE EAST NW (JEFFERSON COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
JEFFERSONVILLE SW QUADRANGLE
SHEET NUMBER 39 OF 40

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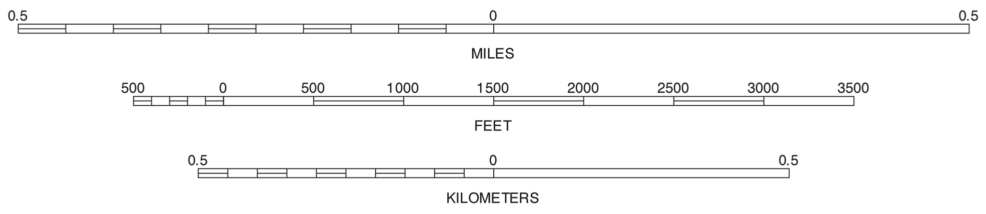
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1	2	3
4		5
6	7	8

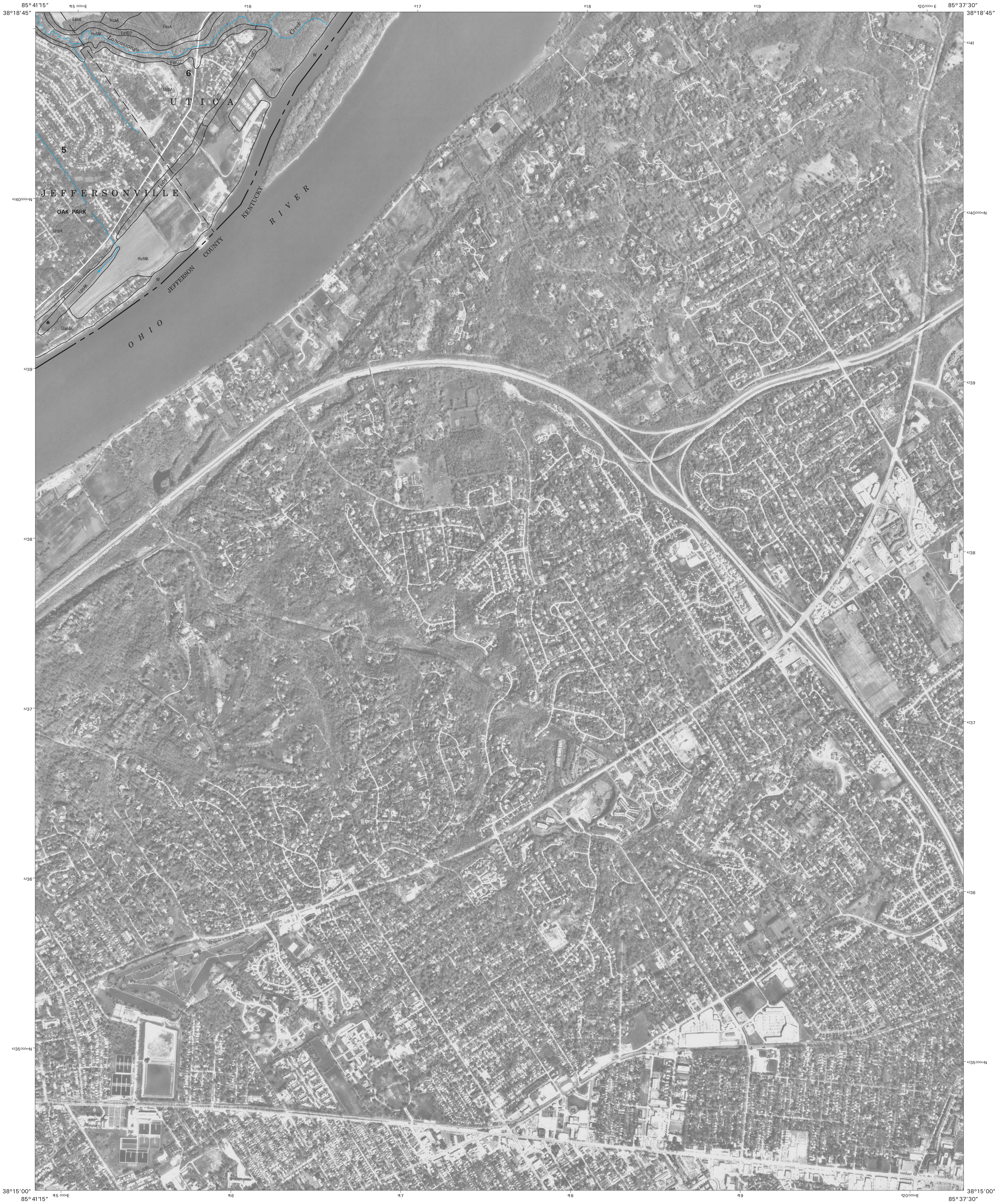
1 NEW ALBANY NE (SHEET 35)
2 JEFFERSONVILLE NW (SHEET 36)
3 JEFFERSONVILLE NE (SHEET 37)
4 NEW ALBANY SE (SHEET 38)
5 JEFFERSONVILLE SE (SHEET 40)
6 LOUISVILLE WEST NE (JEFFERSON COUNTY, KY)
7 LOUISVILLE EAST NW (JEFFERSON COUNTY, KY)
8 LOUISVILLE EAST NE (JEFFERSON COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

JEFFERSONVILLE SW, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 39 OF 40

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CLARK COUNTY, INDIANA
JEFFERSONVILLE SE QUADRANGLE
SHEET NUMBER 40 OF 40



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S.Department of Interior, Geological Survey, from 1998 aerial photography. Culture information public land survey system (PLSS) information were acquired from the U.S.Department of Interior, U.S. Geological Survey. The culture layer was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1	2	3
4		5
6	7	8

1 JEFFERSONVILLE NW (SHEET 36)
2 JEFFERSONVILLE NE (SHEET 37)
3 ANCHORAGE NW (JEFFERSON CO. AND OLDHAM CO., KY)
4 JEFFERSONVILLE SW (SHEET 39)
5 ANCHORAGE SW (JEFFERSON COUNTY, KY)
6 LOUISVILLE EAST NW (JEFFERSON COUNTY, KY)
7 LOUISVILLE EAST NE (JEFFERSON COUNTY, KY)
8 JEFFERSONTOWN NW (JEFFERSON COUNTY, KY)

INDEX TO ADJOINING 3.75 MAPS

JEFFERSONVILLE SE, INDIANA
3.75 MINUTE SERIES
SHEET NUMBER 40 OF 40